Environment and Social Compliance Audit Report

Project Number: 54401-001
Asset-Level Report - Xianyang
April 2021

People's Republic of China: Asia Cube Wastewater Treatment Upgrade Project

Prepared by Stantec Environmental Engineering (Shanghai) Co., Ltd. ("Stantec") for the China Cube Water Company (the "Client") and the Asian Development Bank.

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CURRENCY EQUIVALENTS

(as of 20 April 2021)

Currency unit	–	yuan (CNY)
CNY1.00	=	$0.1539
$1.00	=	CNY6.4964

ABBREVIATIONS

AAOV	Average Annual Output Value
ACMs	Asbestos Containing Materials
ADB	Asian Development Bank
ADB's SPS	ADB Safeguard Policy Statement
AESR	Applicable E&S Requirements
AO	Anoxic Oxic
BOD	Biochemical oxygen demand
BOLAR	Bureau of Land and Resources
BOT	Build-Operate-Transfer
CAI	Completion Acceptance Inspection
CAP	Corrective Action Plan
Capex	Capital Expenditure
CCW	China Cube Water
COD	Chemical oxygen demand
COVID-19	Coronavirus disease-19
ECAI	Environment Completion Acceptance Inspection
E&S	Environmental and Social
EEB	Ecology and Environment Bureau
EIA	Environmental Impact Assessment
EIF	Environmental Impact Form
EIR	Environmental Impact Registration
EMP	Environmental Management Plan
ERP	Emergency Response Plan
ESMS	Environmental and Social Management System
EHS	Environmental, Health and Safety
EHSS	Environmental, Health, Safety and Social
FCAI	Fire-fighting Completion Acceptance Inspection
FSR	Feasibility Study Report
GIIP	Good International Industry Practice
GRM	Grievance Redress Mechanism
HR	Human Resource
HW	Hazardous wastes
IFC	International Finance Centre
IH	Industrial Hygiene
IR	Involuntary Resettlement
IP	Indigenous Peoples
ISQ	I Squared Capital

MEE	Ministry of Ecology and Environment
MEP	Ministry of Environmental Protection
MSDS	Material Safety Data Sheet
NGO	Non-Governmental Organizations
ODH	Occupational Disease health
ODSs	Ozone Depleting Substances
Opex	Operating Expenses
PAHs	Project Affected Households
PCB	Polychlorinated Biphenyls
PDP	Pollutant Discharge Permit
PPE	Personal Protective Equipment
PRC	People's Republic of China
SEP	Stakeholder Engagement Plan
SOP	Standard Operating Procedure
SPS	Safeguard Policy Statement
SS	Suspended Solids
WWTP	Wastewater Treatment Plant

WEIGHTS AND MEASURES

m	meter	mg/m^3	milligram per cubic meter
km	kilometre	ha	hectare
km^2	square kilometre	t/a	tons per annum
m^2	square meter	h	hour
m^3	cubic meter	t	metric ton
mg/kg	milligram per kilogram	^oC	degree centigrade
$\mu g/m^3$	microgram per cubic meter	dB	decibel
t/d	tons per day	MPN/L	Most Probable Number per liter

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Executive Summary

The Asian Development Bank (ADB) is considering provision of financing to the I Squared Capital (ISQ), an independent fund which 100% owns China Cube Water Limited (CCW or the Company). CCW focuses on wastewater treatment projects alongside major rivers in China, and operates nine wastewater treatment plants (WWTPs) with a total capacity of 222,500 tons/day, serving over 2 million population in Henan Province (6 WWTPs), Shaanxi Province (1 WWTP), Heilongjiang Province (1 WWTP) and Guangdong Province (1 WWTP), PRC.

ADB engaged Stantec Environmental Engineering (Shanghai) Co., Ltd. ("Stantec") to conduct an Environmental and Social (E&S) audit at CCW in support of the proposed loan. On 27 January 2021, Stantec conducted the E&S audit at Shaanxi Xianyang Guotang WWTP (Xianyang WWTP or the Site). This E&S audit was conducted based on Xianyang WWTP's current E&S management performance against the Applicable E&S Requirements (AESRs) detailed as Section 1.2.

Jiangsu Bolong Environmental Protection Equipment Co., Ltd. (Bolong) reached a Build-Operate-Transfer (BOT) agreement with local government in 2010, and established Shaanxi Jinte Water Purification Co., Ltd. (Jinte) which constructed the Phase I development of the Site with a designed treatment capacity of 50,000 t/d in 2012 and started the onsite operation in August 2014. Jinte is located in Qindu District, Xianyang City, Shaanxi Province, PRC. In 2020, equipment upgrade was conducted by Bolong as per local authority requirements. The wastewater discharged standard changed from Discharge Standard of Pollutants for Municipal Wastewater Plant (2002) to Integrated Wastewater Discharge Standard of Yellow River Basin in Shaanxi Province (2018). The upgrade included a newly built contact oxidation tank after the original secondary sedimentation tank to enhance the treatment efficiency in COD, NH_3-N and TP. At present, the upgrade has been completed and operated by Bolong, whilst the rest of the operation of Xianyang WWTP is operated by Jinte.

Given the current land area has been fully occupied, thus, land acquisition will be required for the Phase II development which has the designed capacity of 50,000 t/d. However, at this stage, there is no such demand proposed by the local government, nor specific plan or schedule proposed by CCW for the Phase II development.

The scope of the BOT agreement only covers operations of Xianyang WWTP for 30 years. No offsite auxiliary facilities such pipelines, valves or sludge treatment stations and disposal facilities are included in the BOT agreement. The pipelines and valves are part of the existing municipal wastewater treatment network. The wastewater collection pipelines are managed by the local authority including the portions within the site boundaries connecting to the onsite wastewater collection tank. The wastewater collection tank and other wastewater pipelines within the site boundaries are operated and maintained by the site. The sludge treatment stations and/or designated disposal site for dewatered sludge are appointed by the local government as per the concession agreement. These auxiliary facilities are operated and maintained by the local government and third parties. The Phase I development occupies a land area of 35,038 m^2 and receives municipal wastewater from the area about 30 square kilometres (km^2). The actual treatment scale is about 30,000 t/d.

During the audit, no Red Flag (as defined in ***Table 2-3***) issues were identified at the Site, whilst lack of a formalized E&S Management System (ESMS) was identified as a High Risk issue. Overall, the Site has developed and implemented certain health and safety related management, which is in consistent with CCW corporate EHS procedures. However, a dedicated EHS officer leading its implementation, and a formal E&S Management System (ESMS) was not in place. During the Audit, the Site representatives and management expressed knowledge and experience for E&S management (mainly health and safety oriented), as well as willingness for improvement and positive attitude for the risks identified. For the gaps identified and the corresponding recommendations, please refer to Chapter 4.

1. INTRODUCTION

1.1 PROJECT BACKGROUND

The Asian Development Bank (ADB) is considering provision of financing to the I Squared Capital (ISQ), an independent fund focusing on infrastructure investment around the globe. In Asia, ISQ owns and manages infrastructure projects including co-generation of heat and power, renewable energy (solar and wind), telecom, data centre, highway, wastewater treatment via multiple platform companies.

Established in 2006, Jiangsu Jiaqing Water Development Co., Ltd. (Jiangsu Jiaqing) headquarters in Nanjing, Jiangsu province, focuses on municipal and industrial wastewater treatment. Jiangsu Jiaqing introduced ISQ as its strategic investor. By the end of 2018, ISQ acquired 100% share of Jiangsu Jiaqing, making Jiangsu Jiaqing its wholly owned flagship platform company in the field of environmental protection industry. In May 2019, Jiangsu Jiaqing changed the company name to China Cube Water Limited (CCW or the Company).

CCW focuses on wastewater treatment projects alongside major rivers in China, such as the Yellow River and Huai River. As of January 2021, CCW operates nine wastewater treatment plants (WWTPs) with a total capacity of 222,500 tons/day, serving over 2 million population in Henan Province (6 WWTPs), Shaanxi Province (1 WWTP), Heilongjiang Province (1 WWTP) and Guangdong Province (1 WWTP), PRC.

Shaanxi Xianyang Guotang WWTP (Xianyang WWTP or the Site) was established in 2012 by Shaanxi Jinte Water Purification Co., Ltd. (Jinte). Xianyang WWTP was designed to be developed into two phases, with a total wastewater treatment capacity of 100,000 tons per day (t/d), including 50,000 t/d for the Phase I development and 50,000 t/d for the Phase II development. In 2016, CCW acquired 70% of shares of Jinte, while the remaining shares have been held by the mother company of Jinte, Jiangsu Bolong Environmental Protection Equipment Co., Ltd. (Bolong). At the time of the site visit, the Phase I development as well as the upgrade was in operation. Site management reported that the current land area has been fully occupied, thus, land acquisition will be required for the Phase II development. However, there is no such demand proposed by the local government, nor specific plan or schedule proposed by CCW for the Phase II development. **The following descriptions and E&S management discussions focuses on the Phase I development.**

ADB engaged Stantec Environmental Engineering (Shanghai) Co., Ltd. ("Stantec") to conduct an Environmental and Social (E&S) audit at CCW in support of the proposed loan. On 27 January 2021, Stantec conducted the E&S audit at Xianyang WWTP. This report presents the findings of the E&S audit and provides a gap analysis of Xianyang WWTP's current E&S management performance against the Applicable E&S Requirements (AESRs) detailed as Section 1.2.

1.2 SCOPE OF THE ASSET-LEVEL E&S AUDIT

The objective of the E&S audit was to (1) determine the Site's E&S performance; (2) identify potential risks during the construction and operation of the Site, and (3) verify the compliance status of the Site with the following AESRs:

- ADB Safeguard Policy Statement (SPS) (including SPS SR1, SR2, SR3 & SR4), June 2009;
- ADB's Social Protection Strategy, 2001;

- ADB Gender and Development Policy, May 1998;
- ADB Access to Information Policy, 2018;
- World Bank Group's General Environmental, Health and Safety Guidelines, 2007;
- World Bank Group's EHS Guidelines for Water and Sanitation, 2007; and
- Applicable national, provincial and local laws and regulations pertaining to E&S (including land acquisition and resettlement), health and safety and labour in the RPC.

In particular, the scope of the Asset-level E&S audit is to:

- Provide a description of the Site, including types of wastewater treated, water treatment technology; amount and quality of influent and effluent; methane generation and use, if relevant; electricity consumption, any resource conservation technology currently used and/or to be used in the future.
- Review past, current and potential environmental, involuntary resettlement (IR) and indigenous peoples (IP) impacts from construction and operation of the Site and confirm categorization based on ADB's SPS.
- Determine where the Site, including ancillary facilities such as sludge disposal site and pipelines, may cause or are causing environment, occupational and community health and safety (EHS) impacts and risks and opine on the suitability of the existing ESMS or EMP of the Site, including management of COVID-19 risks, monitoring and reporting and related organizational structure and capacity.
- Review any impacts from extreme weather events due to climate change such as floods, and recommended commensurate adaptation measures, as necessary.
- Review related documents, such as the domestic Environmental Impact Assessment (EIA) documents submitted to or approved by the local environmental authorities, Feasibility Study Reports (FSRs), conditions and requirements in the in the EIA approval documents, permits/clearances/certificates, external/internal monitoring results, and any associated reporting requirements to authorities, and opine on the Site's EHS and social aspects and determine if the Site is in compliance with the AESRs.
- Review the suitability and implementation status of any Corrective Action Plans (CAPs) prepared, if any.
- Review any prior land acquisitions done by the local government for the Site and determine if these were undertaken in compliance with PRC's national laws and ADB's requirements.
- Determine if the Site's operation has any impacts on ethnic minorities and assess whether these have been addressed in accordance with PRC's national laws and ADB's SPS.
- Review the Site's stakeholder engagement activities and information disclosure procedures.
- Review the Site's internal and external grievance redress mechanisms, identify past and ongoing complaints issues or feedbacks and review the current status or resolution.

1.3 REPORT STURCTURE

The remainder sections of this report are structured as follows:

- Section 2: Application Standards and Methodology;
- Section 3: Site Assessment;
- Section 4: Corrective Action Plan.

This report is supported by the following annexures:
Annex A: List of Documents Reviewed
Annex B: Stakeholders Engaged during the E&S Audit
Annex C: Photo Log

1.4 LIMITATIONS

The report was prepared in accordance with a scope of work agreed by ADB. The results of the Site are based on conditions at the time of site visit and documents provided by Xianyang WWTP. A change in any of these conditions may alter the findings, observations and report content presented herein by Stantec. A site walkthrough, by nature, is limited in its ability to fully assess potential Environmental, Health, Safety and Social (EHSS) liabilities or concerns associated with a property or operation. Further investigations would be required to identify the presence or absence of potential EHSS liabilities but are beyond detection by performance of the scope of this Site. Laws and regulations, if referenced in this report, are provided for information purposes only and should not be construed as legal opinion or recommendation.

The limitations encountered during the site visit include the following:

1) The site visit was conducted during winter, and limited odour from the WWTP was noticed during the site visit.
2) Due to time constraints, the document review (e.g. labour contracts, inspection records) was conducted by random sampling. The sampling process was not designed to be a comprehensive document review, but rather to verify the current status by sampling for risk screening purpose.
3) Only the payroll records in December 2020 were provided for review, whilst the attendance records and payroll records in other months were not provided for review.
4) The land acquisition was undertaken by the local government in 2010 and 2011. CCW management is not aware of the detailed information about the land acquisition and no interview was conducted with representatives from corresponding stakeholders such as affected person and the local authority.
5) Due to time and conditions constraints, no visit at the Weibin Middle School and Weibin Central Kindergarten was arranged by CCW and no interview was conducted with representatives from these organisations.

2. APPLICATION STANDARDS AND METHODOLOGY

2.1 APPLICABLE STANDARDS

This E&S audit was undertaken in accordance with the following AESRs:

- ADB Safeguard Policy Statement (SPS) (including SPS SR1, SR2, SR3 & SR4), June 2009;
- ADB's Social Protection Strategy, 2001;
- ADB Gender and Development Policy, May 1998;
- ADB Access to Information Policy, 2018;
- World Bank Group's General Environmental, Health and Safety Guidelines, 2007;
- World Bank Group's EHS Guidelines for Water and Sanitation, 2007; and
- Applicable national, provincial and local laws and regulations pertaining to E&S (including land acquisition and resettlement), health and safety and labour in the RPC.

In the PRC, wastewater treatment projects are governed by the following key applicable Chinese E&S regulations listed in *Error! Not a valid bookmark self-reference.*.

Table 2-1: Related E&S Laws and Regulations

Title	General Description
Environment	
Law on Environment Protection (2015)	The law is an umbrella under which relevant laws on air, noise and wastewater emissions, as well as waste management and disposal are integrated. The Law authorizes environmental authorities to establish two types of standards: environmental quality (ambient) standards and discharge/emission standards. Ambient standards are the maximum allowable concentrations of pollutants in water, air or soil. Discharge / emission standards are the maximum allowable concentrations of pollutants' emissions or discharges. The standards provide a basis for the inspection activities of the environmental authorities. The Law on Environmental Protection allocates responsibility for the implementation of environmental protection policies and environmental monitoring to relevant government organizations. Specific details, permits and procedures are stipulated under the relevant State laws for air, water, noise, waste management etc.
Law on Environmental Impact Assessment (2018)	All construction projects are required to comply with a series of environmental protection procedures and policies, principally the following: • Environmental Impact Assessment (EIA) Policy; • "Three Synchronies" Policy; and • Pollutant Discharge Permitting. There are three categories of EIA in the PRC, including (a) Full EIA report for projects with significant environmental impacts, (b) Environmental Impact Form (EIF) for project with moderate environmental impacts, and (c) Environmental Impact Registration (EIR) for projects with limited environmental impacts.
Management Regulations for Environmental Protection for Construction Projects (2017)	
Catalogue for Management of Environmental Impact	Under this catalogue, for wastewater treatment industry, It is understood EIA report is applicable for the WWTP with the daily treatment capacity over 100,000 tons, the EIF is applicable for WWTP with the daily treatment capacity

Title	General Description
Assessment of Construction Projects (2021)	between 500 tons and 100,000 tons, and the EIR is applicable for the rest WWTP with the daily treatment capacity below 500 tons.
Measures on Environmental Impact Post-Assessment of Construction Project (2016)	The measure stipulates the legal requirements of Environmental Impact Post-Assessment for required construction projects, and the post-assessment registration requirement.
Catalogue for management of Pollutant Discharge Permit (2019)	According to the amount of pollutants generated and discharged by the enterprises, public institutions or other business operators and the degree of environmental hazards, three types of pollutant discharge permits (key regulatory, simplified regulatory and registration management) shall be implemented.
Law on the Prevention and Control of Atmospheric Pollution (2018)	The Law on the Prevention and Control of Atmospheric Pollution (2018) provides the basis for air quality protection in China. The Integrated Emission Standard of Air Pollutants (1996) specifies the discharge standards for air emissions.
Integrated Emission Standard of Air Pollutants (1996)	
Law on the Prevention and Control of Water (2017)	The Law on the Prevention and Control of Water (2017) is the key law for water pollution control. It applies to the pollution prevention and control of groundwater and all surface water bodies excluding the sea. It contains water pollution prevention and control standards; monitoring requirements and the management guidelines for water pollution prevention and control; measures for water pollution prevention and control; the pollution prevention and control measures for special water bodies including drinking water sources; the treatment of water pollution events; and legal liabilities. For industrial projects, a Water Pollutant Discharge Permit is required from the Ecology and Environment Bureau (EEB) prior to operational discharges to surface water.
Discharge Standard of Pollutants for Municipal Wastewater Plant (2002)	
Environmental Quality Standards for Surface Water (2002)	
Integrated Wastewater Discharge Standard (1996)	
Law on the Prevention and Control of Environmental Noise Pollution (2018)	Noise is regulated by the Law on the Prevention and Control of Environmental Noise Pollution (2018). This Law sets out the general requirements for noise control including noise from industrial sites, construction sites and transportation. The Emission Standard of Environmental Noise for Boundary of Construction Site (2011) and the Emission Standard for Industrial Enterprises Noise at Boundary (2008) are applicable for construction and operational activities, respectively.
Emission Standard of Environmental Noise for Boundary of Construction Site (2011)	
Emission Standard for Industrial Enterprises Noise at Boundary (2008)	
Law on the Prevention and Control of Solid Waste Pollution (2020)	Law on the Prevention and Control of Solid Waste Pollution (2020) stipulates the requirements for general industrial waste, domestic waste, and hazardous

Title	General Description
Management Regulation for Hazardous Waste Transfer Manifests (1999)	waste management including collection, storage, transportation, treatment, recycling and disposal. The on-site storage and disposal of industrial solid waste is subject to the Standard for Pollution Control on Industrial Solid Waste Storage and Landfill (2020). The Management Regulation for Hazardous Waste Transfer Manifests (1999) stipulates the documentation and tracking procedures for hazardous waste generators, transporters and disposal operators.
Standard for Pollution Control on Industrial Solid Waste Storage and Landfill (2020)	
Law on Energy Conservation (2018)	The Law on Energy Conservation (2018) and Law on Cleaner Production Promotion (2012) stipulates the legal requirements on energy saving during both construction and operation of a development project.
Law on Cleaner Production Promotion (2012)	
Law on the Prevention and Control of Soil Pollution (2019)	The Environmental Quality Standards for Construction Soil Pollution Risk Control (Trial) (2018), Environmental Quality Standards for Agriculture Soil Pollution Risk Control (Trial) (2018), Law on the Prevention and Control of Soil Pollution (2019) and the Quality Standard for Ground Water (2017) define the quality standards applicable for soil and groundwater depending on the different uses.
Environmental Quality Standards for Construction Soil Pollution Risk Control (Trial) (2018)	
Environmental Quality Standards for Agriculture Soil Pollution Risk Control (Trial) (2018)	
Environmental Quality Standard for Ground Water (2017)	
Methods for Public Participation in Environmental Impact Assessment (2019)	The Methods for Public Participation in Environmental Impact Assessment (2019) prescribes the requirements for public consultation during the process of EIA for a development project. And it requires that public consultation should be conducted while preparing full EIA Report, whilst there is no specific legal requirement regarding consultation with communities for EIF and EIR.
Local Requirement	
Integrated Wastewater Discharge Standard of Yellow River Basin in Shaanxi Province (2018)	The standard prescribes 19 types of pollutant discharge requirements for wastewater, including pH, chemical oxygen demand (COD), total nitrogen, total phosphorus, etc., of yellow river basin in Shaanxi Province.
Health & Safety	
Law on Work Safety (2014)	These laws stipulate principles on work safety, occupational health and fire protection issues, including work safety and occupational hazards assessment, facility design and construction, completion acceptance inspection, training, monitoring and medical check-up, facility inspection and maintenance, etc.
Law on Occupational Diseases Prevention (2018)	
Law on Fire Protection (2019)	

Title	General Description
Biodiversity	
Law for Wildlife Protection (2018)	Law for Wildlife Protection (2018) and Regulation on Wild Plant Protection (2017) stipulates the requirements for protecting and saving wildlife or wild plant, defines the wildlife or wild plant habitat, and establishes disciplinary measures.
Regulation on Wild Plant Protection (2017)	
Land Acquisition and Resettlement	
Law on Land Administration (2020)	The Land Administration Law stipulates that where land acquisition is necessary[1], compensation shall be made in accordance with the original usage of the acquired land, which shall include a land compensation fee, a resettlement subsidy (if applicable) and a compensation fee for land "attachments" (e.g. various trees and houses) and standing crops. The land compensation fee for cultivated land is six to10 times the average annual output value (AAOV) of the land in the three years preceding the land acquisition. The relevant compensation standards for land "attachments" and standing crops are to be determined by the local government.
Regulations on Implementation of Land Administration Law (2014)	
Labour	
Labour Law (2018)	Labour law (2018) stipulates the rights and corresponding obligations of workers, states that "employees enjoy the rights of equal employment and choice of occupation, the right to receive labour remuneration, the right to rest and vacation, the right to obtain labour safety and health protection, the right to receive vocational skill training, the right to enjoy social insurance and welfare, the right to apply for settlement of labour disputes and other labour rights stipulated by law" and "laborers should complete their labour tasks, improve their professional skills, implement labour safety and health regulations, and abide by labour discipline and professional ethics".
Labour Contract Law (2012)	
Cultural Heritage	
Cultural Relics Protection Law (2017)	It stipulates project proponents to undertake baseline archaeological surveys to determine the presence and condition of cultural relics where construction works have the potentiality to damage them.
Implementation Regulations of the Law on Cultural Relics Protection (2017)	
Public Consultation and Information Disclosure	
Methods for Public Participation in Environmental Impact Assessment (2019)	It stipulates that construction projects that may have significant effects on the environment should incorporate public comments into the EIA report. Either the Project proponent (or the EIA agency on behalf of the Project proponent) should provide project information to the public and to the local EEB during the process of environmental impact assessment. A summary EIA report shall be provided for public review in hard copy format at a designated location or in electronic format on a public website.
Gender	

[1] The Project Affected Households (PAHs) can reject the land acquisition as long as it is not for the public good projects. The land law applies to all land acquisition activities, as long as it is 'land acquisition/ expropriation'.

Title	General Description
Law on the Protection of Women's Rights and Interests (2018)	It stipulates women's rights in social and economic life, including political rights, cultural and educational rights and interests, labour and social security rights and interests, property rights, personal rights, marriage and family rights and interests.
Ethnic Minorities	
Law on Regional National Autonomy (2001)	It stipulates that regional ethnic autonomy is a basic political system in China. Article 10 emphasizes that the organs of self-government in national autonomous areas shall guarantee the freedom of all ethnic groups in the region to use and develop their own languages and characters, and the freedom to maintain or reform their own customs and habits.

In addition, in regard to flood risk control, as per the Code of Design of Outdoor Wastewater Engineering (GB 50014-2006 amended in 2014), the site selection should not be impacted by flooding, and the flood control standard of the site should be as least meeting the local city flood control standard (as per the Standard for Flood Control (GB 50201-2014), mainly taking the population and economic of the city into consideration) with good drainage condition. In both the FSR and EIA documents, a simple description of the local meteorological condition is included, stating the status quo of temperature, precipitation, wind direction, etc. in the local area, however, it is not an extreme weather impact assessment covering historic and future situations, nor mentioning the historical events as only the historical max precipitation data is included.

Specially, Shaanxi released the Integrated Wastewater Discharge Standard of Yellow River Basin in Shaanxi Province (2018). The discharge limits of COD, NH_3-N, TN and TP of Shaanxi local standard Class A are 30 mg/L, 1.5 mg/L, 15 mg/L and 0.3 mg/L. The standard has become effective since 1 April 2020 for all existing WWTPs located in Yellow River Basin in Shaanxi including CCW's Xianyang WWTP.

2.2 E&S PERMITTING REQUIREMENTS

In general, for a wastewater treatment project, the following key topical assessments and applications are required (***Table 2-2***).

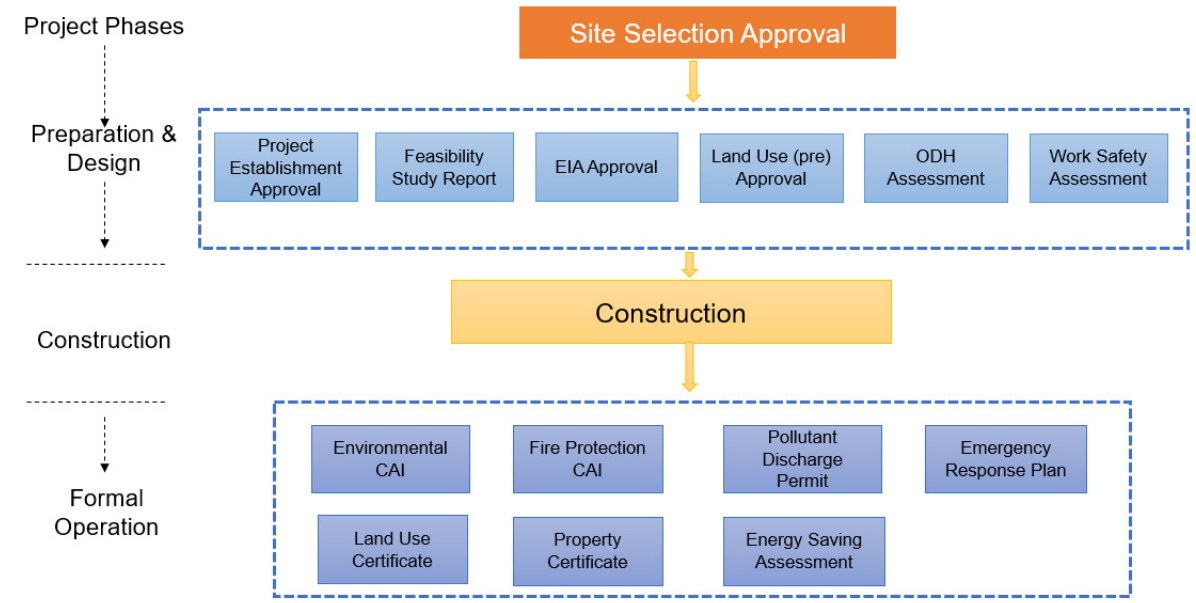
Table 2-2: E&S Permitting Requirements

E&S Permit	Applicable Standard Type	Description
Site selection application	National Standard	An approval issued by the local authorities on whether the project comply with local planning requirement.
Feasibility Study Report (FSR)	National Standard	A comprehensive analysing report based on economic, technological, production, supply and marketing, social, environmental and legal factors, to determine the feasibility of the project.
Land Use documents	National Standard	Land users are required to obtain Construction Land Use Certificate. The land certificate is issued by the local government. It is a written document certifying that the holder has the ownership or right to use a certain area of land.
Environmental Impact Assessment (EIA) documents	National Standard	Based on Catalogue for Management of Environmental Impact Assessment of Construction Projects (2021), the EIF report is

		applicable for the Site as the WWTP with the daily treatment capacity between 500 tons and 100,000 tons. The EIF report is generally consisting of applicable standards, project description, pollution control analysis, ecological impacts, extreme weather analysis (including climate, flooding, earthquake, etc.) and public participation.
Environmental Completion Acceptance Inspection (ECAI)	National Standard	Since November 2017, China government has been implementing self-conducting ECAI procedures (meaning the corresponding monitoring and acceptance are conducted by the project owner) for environmental protection by phases. In November 2017, the air emission self-conducting ECAI has been commenced; In January 2018, the wastewater discharge self-conducting ECAI has been commenced; In December 2018, the boundary noise self-conducting ECAI has been commenced; In September 2020, the solid waste self-conducting ECAI has been commenced.
Pollutant Discharge Permit (PDP)	National Standard	For wastewater and air emission discharge companies, the PDP was required from local EEB, which illustrate the pollutant discharge capacity, discharge points, and monitoring programme.
Fire Protection CAI	National Standard	An approval issued by the local authorities on whether the project comply with fire protection design and implementation requirement.
Work Safety Assessment	National Standard	The report identifies and analysis of project's production and business operation activities of potential danger and harmful factors, and safety standards, to predict the likelihood of accidents and its severity, and then puts forward feasible safety control measures.
Occupational Disease Hazards (ODH) Assessment	National Standard	The report identifies and analysis of potential occupation health hazards within the project's production processes and compare with local standards to predict the likelihood of occupational health hazard and its severity, and then puts forward feasible safety control measures.
Emergency Response Plan (ERP)	National Standard	The ERP includes sudden environment and safety ERPs. The sudden environment ERP consists of applicable standard, environmental risk analysis (including chemical storage and spills, water pollution, soil pollution, ecological conditions, etc.), and emergency response methods. The safety ERP consists of applicable standard, safety risk analysis (including fire, explosion, equipment hazards etc.), and emergency response methods.
Energy Saving Assessment	National Standard	The Energy Saving Assessment consists of applicable standard, energy supply and consumption conditions, and applicable energy saving measures.

Error! Reference source not found. below presents the general permitting process that a project will need to maintain compliance over the full life cycle with applicable E&S regulations.

Figure 2-1: Indicative Project Permitting Flowchart by Project Phases



Please note that the above flowchart is indicative only under the current regulatory regime, which has been and continues to evolve rapidly. Meanwhile, local implementation of the national level laws and regulations often varies, which may lead to variations to the permitting flowchart presented in this report.

2.3 METHODOLOGY

2.3.1 Approach

An integrated approach with three steps was proposed by Stantec for subproject level E&S audit as stated below. This approach was subsequently agreed by the ADB.

Step 1: Document Request and Desktop-based Review:

Stantec requested documents from Xianyang WWTP including (i) CCW and Xianyang WWTP ESMS or policies and official commitments related to environmental, health, safety and social safeguards, policies and procedures that would typically be covered by an ESMS; (ii) Information about the system for project planning to manage environmental and social risks; (iii) Information about Xianyang WWTP's training records for staff regarding environmental and social safeguards; (iv) Human Resource (HR) management and procurement policies and procedures, gender disaggregated information, labour contract, attendance sheet and salary records in Xianyang WWTP; (v) Information about Xianyang WWTP's main stakeholder groups, activities through which they are engaged and consulted, and any grievance redress system and its results log; and (vi) Information about the environmental, health, safety and social monitoring records, pollutant prevention and reporting system.

Stantec conducted a review of documentation of Xianyang WWTP through intermediaries and onsite review. Annex A lists the key documents provided by Xianyang WWTP and reviewed by Stantec during this E&S audit.

Step 2: Site Visit

Stantec conducted an onsite visit at Xianyang WWTP on 27 January 2021. During the onsite visit, Stantec's E&S team:

- Reviewed documentation available at the Site (listed in Annex A);
- Conducted selected interviews with site representatives and representative from the local environmental authority (listed in Annex B);
- Conducted a limited visual observation of the Site (WWTP sections/areas observed with photos are in Annex C); and
- Reviewed the implementation and compliance status of the E&S mitigation and management measures.

Step 3: Gap Analysis and Reporting

Based on the information obtained during Steps 1 and 2, gaps against the AESRs were identified at the Site (refer to Section 3). A CAP setting out the steps that would be required to close the identified gap(s) is outlined in Section 4.

2.3.2 Risk Categorization

Risk levels were adopted in evaluating identified E&S risks and issues against the AESRs: "Red Flag", "High", "Medium", "Low" and "Best Practice" risks as defined in ***Table 2-3***.

Table 2-3: Definition for Risk Categorization

Risk Level	Definition
Red Flag	Trigger of ADB SPS Prohibited Activities or issue with potential severe consequences and limited opportunities of mitigating, leading to operation shut down (e.g. catastrophic or multiple-casualty accidents; large community or NGO protest(s); reputational damage/possibilities of significant reputational risks arising in the future; impacts to sensitive environmental and social receptors including critical habitats and Indigenous Peoples/Ethnic Minorities/Tribes and criminal proceedings).
High	Significant non-conformance with the AESRs, which may result in operation /construction interruption; and/or affect sensitive receptors, and/or induce community opposition that may damage Owner's/Investor's reputation.
Medium	Non-conformance with the AESRs, which may result in rectification cost or fine, and is unlikely to result in the short-term business discontinuity in current regulatory enforcement context.
Low	Minor regulatory or safeguard non-compliance, which may result in limited cost or only require management time to address the issue.
Best Practice	Best practice; approach is considered prudent but does not pose a compliance issue.

3. SITE ASSESSMENT

3.1 BASIC INFORMATION

The Site is located in Qindu District, Xianyang City, Shaanxi Province, PRC. The location of the Site is shown in *Error! Reference source not found.*. Jiangsu Bolong Environmental Protection Equipment Co., Ltd. (Bolong) reached a Build-Operate-Transfer (BOT) agreement with local government in 2010. The agreement required that Bolong to establish a subsidiary responsible for construction and operation of Xianyang WWTP, therefore, Bolong established Shaanxi Jinte Water Purification Co., Ltd. (Jinte) in 2010. The Site was constructed in 2012 by Jinte and started operation in August 2014. According to the Site management interview and document review, Xianyang City Bureau of Land and Resources (BOLAR) allocated the land with 53,368 m^2 (80 mu[2]) for the use of Xianyang WWTP and transferred the land to Jinte in 2013. In 2016, one other company, i.e. Xianyang Zerui Water Purification Co., Ltd. (Zerui) was established in the same compound, occupying 18,330 m^2 (27 mu) of the site land of Xianyang WWTP. Zerui is also a municipal WWTP that receives industrial wastewater generated from the factories in the nearby industrial zone. The Site management reported that there is no business relationship between Xianyang WWTP and Zerui and the land occupation was required and arranged by the local government. There are no shared facilities between Xianyang WWTP and Zerui. Xianyang WWTP and Zerui share the land use certificate and pay land taxes corresponding to the portion of their occupations, respectively. There was no written agreement such as land lease agreement signed between Xianyang WWTP and Zerui. The location and area of the two factories are shown in ***Figure 3-2***.

The Site history is mainly obtained through interview with CCW's senior management and onsite management, and is summarized as below:

- Prior to 2010: Farmland of Gaotang Village;
- 2010-2011: Land acquisition and resettlement was conducted by the local government, i.e. Xianyang High-tech Industrial Development Zone BOLAR;
- 2012: Construction of the Phase I development conducted by Jinte was commenced;
- August 2014: Construction was completed. Operation was commenced by Jinte;
- 2016: CCW acquired 70% of shares of Xianyang WWTP;
- 2017: Zerui established in the same compound;
- 2020: An upgrade was conducted by Bolong, the minority shareholder of Xianyang WWTP, including a newly built contact oxidation tank after the original secondary sedimentation tank to enhance the treatment efficiency in COD, NH_3-N and TP as per local authority requirements. The wastewater discharged standard changed from Discharge Standard of Pollutants for Municipal Wastewater Plant (2002) to Integrated Wastewater Discharge Standard of Yellow River Basin in Shaanxi Province (2018).
- Present: The upgrade was completed and the upgraded processes are operated by Bolong, whilst the rest of the operation of Xianyang WWTP is operated by Jinte.

The scope of the BOT agreement only covers operations of Xianyang WWTP for 30 years. No offsite auxiliary facilities such pipelines, valves or sludge treatment stations are included in the BOT agreement. The wastewater collection pipelines are managed by the local authority including the portions within the site boundaries connecting to the onsite wastewater collection tank. The wastewater collection tank and other wastewater pipelines within the site boundaries are operated and maintained by the site. Xianyang WWTP receives municipal wastewater from the area about 30 square kilometres (km^2). The designed treatment capacity of the Phase I development is 50,000 t/d, and the actual

[2] Mu is the Chinese land area unit, and one mu is approximately equal to 666 square meters.

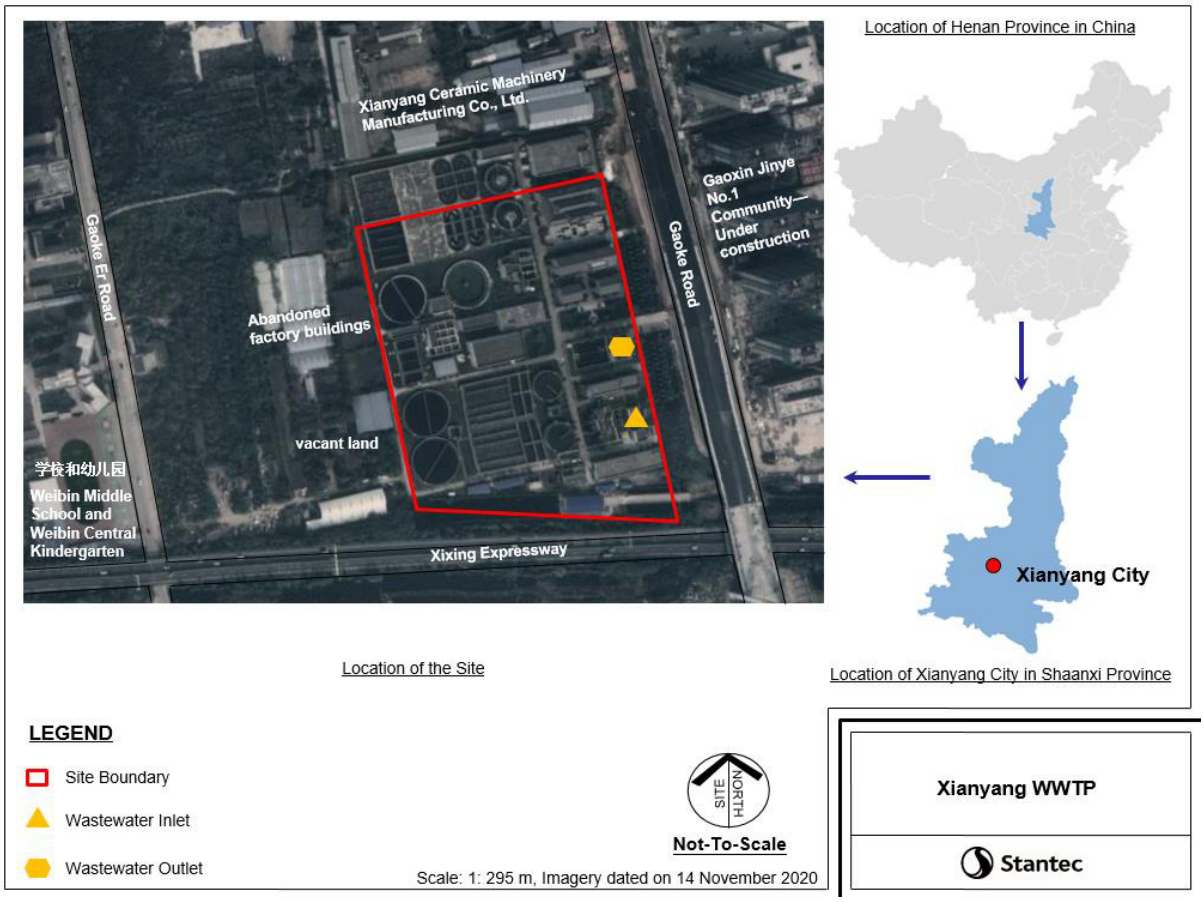
treatment scale is about 30,000 t/d. The Site runs in a three-shifts working system for 365 days a year, with 27 staff.

The Site covered a total land area of 35,038 m^2. According to the Site EIA report dated 2009, the buffer zone area is determined as a 300 m radius of the production area to reduce adverse effects on surrounding environment. The Adjacent facilities and properties of the Site were identified as follows:

- West boundary: Abandoned factory buildings and vacant land. Further west is Gaoke Er Road, Weibin Middle School and Weibin Central Kindergarten (about 300 m to the site boundary).
- East boundary: Gaoke Road and Gaoxin Jinye No.1 Community (about 90 m to the site boundary).
- North boundary: Xianyang Ceramic Machinery Manufacturing Co., Ltd. and Xiangbai Road.
- South boundary: Xixing Expressway.

The Site area is classified as construction land and is not within area of the ecological red line (which in China refers to the strictly controlled boundary demarcated in accordance with law in key ecological function zones, sensitive and fragile areas of the ecological environment). There are no natural reserves, drinking water protection zone, scenic spot, national key protected animals and plants, seed fields, cultural relics and historic sites located in the 1 km area around the Site. The Site meets the requirements of the overall planning of Xianyang City. Based on onsite observation, sensitive receptors of the Site include Weibin Middle School which is located approximately 300 m to the west of the Site, Weibin Central Kindergarten which is located approximately 300 m to the west of the Site, and one residential area under construction, i.e. Gaoxin Jinye No.1 Community, which is located approximately 90 m to the east of the Site and is a breach of the buffering zone.

Figure 3-1: Site Location

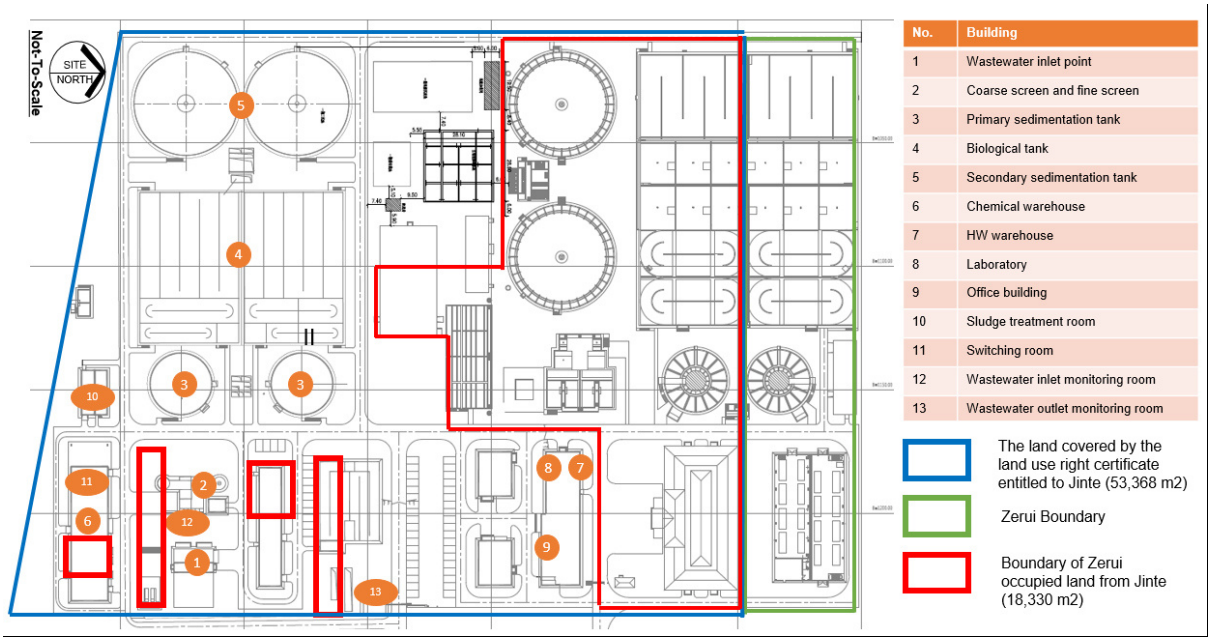


Source: Google Earth Pro

3.2 SITE DESCRIPTION

The main structures of the Site cover wastewater treatment facilities, environmental protection facilities, and office building. Pumps houses, switching room, and ventilation room were built operated and maintained by the Site. The wastewater collection pipelines are managed by the local authority including the portions within the site boundaries connecting to the onsite wastewater collection tank. The wastewater collection tank and other wastewater pipelines within the site boundaries are operated and maintained by the site. In addition, the inlet and outlet monitoring rooms were built by the Site, operated and maintained by the local EEB. The layout of the Site is presented in ***Figure 3-2***.

Figure 3-2: Site Layout



The wastewater treatment processes consist of three stages: pre-treatment, biological treatment (or secondary treatment), and tertiary treatment. The main treatment processes are Wastewater Feeding, Coarse Screen and Fine Screen, Primary Sedimentation Tank, Anaerobic Tank, Anoxic Tank, Oxic Tank, Secondary Sedimentation Tank, Filter Tank, Disinfection Tank and Final Discharge. Chemicals used for wastewater treatment include polymeric ferric sulphate, polyacrylamide, hydrogen chloride, chlorine dioxide and sodium chlorate. These chemicals are in bulk storage and the corresponding storage condition is described in Section 3.3.3.

The Site adopts Anaerobic-Anoxic-Oxic, Biological Contact oxidation and Filtration Technologies which are commonly adopted for WWTPs for industrial and domestic wastewater treatment in PRC. Based on review of the available document and interview with site management, no violation with regard to wastewater discharge has been taken place at the Site.

The sludge is dehydrated onsite to around 80% and is transferred by the sludge truck owned and operated by the subproject company to Qinjun Landscape Construction Co, Ltd., as appointed by the local government as per the signed BOT agreement, for incineration or making bricks.

The treated wastewater shall comply with the Integrated Wastewater Discharge Standard of Yellow River Basin in Shaanxi Province (2018) and then discharged to the Wei River which is located 1,700 m to the east of the Site.

3.3 EHS ASSESSMENT

3.3.1 EHS Management Overview

The EHS issues arising from the Site are under the jurisdiction of Xianyang EEB, Xianyang Health Bureau, Xianyang Emergency Management Bureau and Fire Brigade of Xianyang Public Security Department. Mr. An Mengchun (WWTP Director) and Mr. Wang Song (Manager of the Production Department) are responsible for the general on-site environmental and safety management. Ms. Liu Jie (Manager of the Administration Department) is responsible for the occupational disease check-ups for the staffs exposed to occupational hazards. The day-to-day EHS status are reported to the Production Technology Department of CCW corporate directly via weekly, monthly and annual reports.

The EHS policies and procedures of CCW corporate is not fully implemented by the Site. The subproject itself has not developed and implemented a formal EHS and social management system, instead it developed its own safety and health oriented procedures covering equipment operational procedure, work safety management (e.g. fire, electricity and working at height), safety inspection procedure, underground work procedure, laboratory management procedure, and occupational hazard management procedure. Environmental related procedures such as chemical management, environmental monitoring management, solid waste management, etc. were not in place.

According to the management interview, at subproject level, all subprojects safety inspections were conducted as follows:

- Subsidiary-level safety overall inspection conducted by the manager of the Tier 2 subsidiaries on a yearly basis. The inspection reports and corresponding mitigation measures are submitted for the corporate for review.
- Subproject-level daily safety and operational inspection is conducted by the representative of Operation Department.

Based on the management interview and document review, the E&S related capital expenditure (Capex) and operating expenses (Opex) application for the subproject is prepared by the subproject manager in October every year, and then submitted for General Manager Office of CCW corporate for review and approval. The Capex (including items such as safety correction, COVID-19 prevention material, etc.) and Opex (including items such as environmental monitoring, sludge monitoring, equipment maintenance, laboratory material, routine check-ups, PPE, etc.) for Xianyang WWTP in 2021 was provided for review, with a total budget of RMB 815,460.

Key EHS related findings and issues were summarized as follow:

- A formal environmental and social management system was not developed and implemented by Xianyang WWTP. Environmental related procedures such as chemical management, environmental monitoring management, solid waste management, etc. were not in place.

3.3.2 EHS Permit

The permit compliance status of the Site is summarized as follows in the ***Table 3-1***:

Table 3-1: Permit Compliance Status

Permit	Review
Site Selection Application	Site Selection Application approval approved by Xianyang Housing and Urban-Rural Development Bureau on 21 December 2010
FSR and its approval	• FSR approval for the Phase I and Phase II developments issued by Xianyang Development and Reform Commission on 29 December 2009 • FSR approval for the Phase I development upgrade issued by Xianyang Hi-tech District Economic Development Bureau on 19 July 2019
Land Permit	• Reply on the Pre-approval Opinions of Construction Project Land issued by Xianyang City BOLAR (Bureau of Land and Resources) on 7 January 2011 • Construction Land-use Certificate of area 53,368 m^2 (80 mu) for the Phase I Development issued by Xianyang City BOLAR on 30 May 2013
EIA, ECAI and the approvals	• EIA approval for the Phase I and Phase II developments issued by the Xianyang EEB on 17 December 2009 • ECAI approval for the Phase I development issued by the Xianyang EEB on 26 August 2014 • EIA report and approval for Phase I development upgrade issued by the Xianyang Hi-tech District EEB on 15 November 2019
PDP	PDP for the Phase I development issued by Xianyang EEB valid between 4 July 2019 and 3 July 2022
Water Abstraction Permit	Not available
Fire Protection CAI	FCAI Registration Record issued by Fire-fighting Brigade of Xianyang City Public Security Bureau on 23 July 2015
Work Safety CAI	Not available
Occupational Disease Hazards Assessment	Occupational Disease Hazards Current Status Assessment prepared by Shanxi Zhonghuan Testing Service Co., Ltd. in December 2020
Sudden Environmental Emergency Response Plan (ERP) and its registration record	Not available
Safety Production ERP and its registration record	Not available
Energy Saving Assessment	This document was not required by the local authorities at the time of the Site establishment

The EIA report prepared for this project during the permitting phase identified air emission, odour and solid waste/sludge as the key environmental impacts during construction and operation and the project was required implementing corresponding dust control measures such as sprinkler for construction vehicles, proper treatment of construction waste, etc. during construction, and regular boundary odour monitoring and ensuring sludge is treated by the third party appointed by the local government during operation. The content of the EIA report is generally in line with an environmental assessment required by ADB's SPS.

During construction, there are typical EHS requirements in PRC, including the dust control, solid waste management, Personal Protective Equipment (PPE), regular monitoring, etc. No findings were identified.

The project started its operation in 2014 after securing the ECAI which confirmed that the WWTP complied with the standards of boundary odour, wastewater discharge, boundary noise and solid waste treatment.

Key EHS related findings and issues were summarized as follow:

- Given the upgrade was just completed in 2020, the corresponding ECAI procedure has not been completed.
- The PDP was not updated in accordance with the upgrade as required.
- The Site uses one onsite groundwater abstraction well (with a depth of 30 m) for sanitary purpose. However, the Water Abstraction Permit has not been obtained as required.
- No Work Safety Assessment has been conducted as required.
- No Sudden Environmental or Safety Production ERP and the corresponding registration records were obtained as required.

3.3.3 EHS Performance

Water Supply, Domestic and Storm Wastewater

According to the management interview, municipal tap water mains have not been connected to the Site. Water used for sanitary purpose is groundwater abstracted from one onsite groundwater abstraction well (with a depth of 30 m); water for drinking purpose is purchased bottled water; water for production purposes (wastewater treatment) is the treated wastewater from the onsite facility.

Separate wastewater and stormwater drainage systems were established for the Site. The domestic wastewater generated onsite is collected and discharged to the onsite facility for further treatment. Stormwater generated onsite is collected and discharged via the same treated wastewater outlet, which is ultimately discharged to the Wei River.

Wastewater and Sludge from the Wastewater Treatment Process

The Wei River is located 1,700 m to the east of Xianyang WWTP. According to the Site's EIA documents, the Wei River is a Type IV water body as defined in the Environmental Quality Standards for Surface Water (2002), which refers to surface water mainly used for industrial area and recreational water area. Site management reported that the treated wastewater discharge from Xianyang WWTP is strictly monitored as the following:

- Xianyang EEB has installed the real-time influent and effluent wastewater online monitoring system at the wastewater discharge point of the Site to conduct pollutant tests on a two-hour basis. This is confirmed with local EEB representative;
- Xianyang EEB conducts treated wastewater sampling test on a random basis;
- Xianyang WWTP engages a licensed third party to conduct wastewater test on a monthly basis;
- The laboratory of Xianyang WWTP conducts wastewater test once a day.

The five pollutants including chemical oxygen demand (COD), suspend solids (SS), total nitrogen, total phosphorus and ammonia nitrogen are monitored by both onsite laboratory and online monitoring system every day, thus, they are not covered in the third-party monitoring reports. Based on the internal monitoring data (in average of 2020) and latest sampled monitoring report conducted by a licensed third party dated December 2020 (refer to ***Table 3-2***), the results met the Integrated Wastewater Discharge Standard of Yellow River Basin in Shaanxi Province (2018). As there is no ADB or IFC standards for the wastewater discharge, the national regulatory standard is the applicable standard.

Table 3-2: Wastewater Monitoring Results

Monitoring Type	Pollutant	Unit	Monitoring Results	Local Standards	Compliance Statue
Internal Monitoring (in average of 2020)	**COD**	mg/L	21.76	40	Meet the standards
	SS	mg/L	/	10	Meet the standards
	Total nitrogen	mg/L	6.16	15	Meet the standards
	Total phosphorus	mg/L	0.08	0.5	Meet the standards
	Ammonia nitrogen	mg/L	0.25	5	Meet the standards
Third Party Monitoring (dated December 2020)	**pH**	——	7.82	6-9	Meet the standards
	COD	mg/L	28	30	Meet the standards
	NH_3-N	mg/L	0.441	1.5	Meet the standards
	Oil and grease	mg/L	ND	1	Meet the standards
	Petro	mg/L	0.07	1	Meet the standards
	SS	mg/L	7	10	Meet the standards
	Chroma	Times	5	30	Meet the standards
	BOD_5	mg/L	5.3	6	Meet the standards
	Arsenic	mg/L	0.0018	0.1	Meet the standards
	Total phosphorus	mg/L	0.090	0.3	Meet the standards
	Total lead	mg/L	ND	0.1	Meet the standards
	Total cadmium	mg/L	ND	0.01	Meet the standards
	Anionic surfactant	mg/L	0.106	0.5	Meet the standards
	Total coliform bacteria	MPN/L	9.5×10^2	1.0×10^3	Meet the standards
	Hexavalent chromium	mg/L	ND	0.05	Meet the standards
	Total chromium	mg/L	0.00391	0.1	Meet the standards
	Total nitrogen	mg/L	5.15	15	Meet the standards
	Mercury	mg/L	ND	0.001	Meet the standards
	Alkyl mercury	mg/L	ND	Not Allowed	Meet the standards

**Note:*
1. The monitoring was conducted by Shaanxi Huaxin Testing Technology Co., Ltd.
2. Local Standard refers to Integrated Wastewater Discharge Standard of Yellow River Basin in Shaanxi Province (2018)

3. ND means Not Detected

In China, the annual pollutant mass loading quotas are allocated to WWTP projects during the EIA stage based on (1) designed wastewater treatment capacity; (2) pollutant removal efficiency and discharge limits; (3) local environmental capacity. The mass loading quotas for wastewater pollutants COD, ammonia nitrogen, total nitrogen and total phosphorus are 547.5 t/a, 27.375 t/a, 273.75 t/a and 5.475 t/a, respectively. Given the current actual wastewater treatment is below the designed wastewater treatment capacity (30,000t/d versus 50,000 t/d), and the treated wastewater meet the local standards, Xianyang WWTP is well below the allocated pollutant mass loading quotas.

Air Emission

The main sources of air emission in this Site is fugitive odour emission from the uncovered wastewater treatment tanks. Xianyang WWTP engages a licensed third party to conduct fugitive air emission monitoring on a half year basis around the Site boundary following the methodology by Analysis Methods for air and gas emission monitoring (2003). Based on the latest sampled monitoring report conducted by a licensed third party dated November 2020 provided for review (***Table 3-3***), the results met the Discharge Standard of Pollutants for Municipal Wastewater Plant (2002). As there is no ADB or IFC standards for the fugitive air emission pollutants, the national regulatory standard is the applicable standard.

Table 3-3: Fugitive Air Emission Monitoring Results

Monitoring date	Location	Pollutant	Unit	Monitoring Results	Local Standard	Compliance Statue
11 November 2020 (The first time)	**Boundary**	H_2S	mg/m^3	ND	0.06	Meet the standards
		NH_3	mg/m^3	0.055-0.103	1.5	Meet the standards
		Odour	——	＜10	20	Meet the standards
	Anaerobic Tank	CH_4	%	1.58×10^{-4}	1	Meet the standards
11 November 2020 (The second time)	**Boundary**	H_2S	mg/m^3	ND	0.06	Meet the standards
		NH_3	mg/m^3	0.044-0.073	1.5	Meet the standards
		odour	——	＜10	20	Meet the standards
	Anaerobic Tank	CH_4	%	1.48×10^{-4}	1	Meet the standards
11 November 2020 (The third time)	**Boundary**	H_2S	mg/m^3	ND	0.06	Meet the standards
		NH_3	mg/m^3	0.048-0.091	1.5	Meet the standards
		Odour	——	＜10	20	Meet the standards
	Anaerobic Tank	CH_4	%	1.21×10^{-4}	1	Meet the standards

**Note:*

1. The monitoring is conducted by Shaanxi Huaxin Testing Technology Co., Ltd.

2. Local Standard refers to Discharge Standard of Pollutants for Municipal Wastewater Plant (2002)

3. ND means Not Detected

Noise Emission

The main sources of noise are the onsite production facilities such as pumps and ventilator. The Site boundary noise is subject to Class II of Emission standard for industrial enterprises noise at boundary (2008), which requires the maximum 60 dB(A) during the daytime (6:00 AM – 10:00 PM) and 50 dB(A) at night (10:00 PM – 6:00 AM). The nearest sensitive target is Weibin High School located about 300 m west to the Site. According to the management interview, no boundary noise monitoring was conducted in recent years.

Chemical Management and Hazardous Waste

Chemicals consumed by the Site are summarised below:

- Polymeric ferric sulphate is used in reaction & sedimentation tank to remove total phosphorus and also for flocculation purpose. The polymeric ferric sulphate is stored in one aboveground storage tank.
- Polyacrylamide is used in sludge dewatering equipment to improve the sludge dewatering efficiency. The polymeric ferric sulphate is stored in 20kg bags in sludge treatment room.
- Sodium chlorate and hydrogen chloride are raw materials to generate chlorine dioxide, and chlorine dioxide is dosed in contact disinfection tank for disinfection purpose. The sodium chlorate, hydrogen chloride and sodium chlorate are all stored in aboveground storage tanks.
- Limited amount lubricant/machine oil that are used for maintenance purposed, are in 200 litre drums and only purchased upon demand.
- Limited amount of reagents such as hydrogen chloride and sulfuric acid that are used in the laboratory for routine internal water testing purpose, are in bottles stored in the onsite laboratory. The valid precursor chemicals registration record was provided for review.

All chemicals are stored in onsite aboveground storage tanks and one chemical storage room (with an area of about 150 m^2) with SOP, MSDS and safety guidelines posted in the area, In addition, the secondary containment and fire prevention measures are in place.

Hazardous wastes (HW) such as empty chemical containers, waste lubricant oil and waste liquid are treated by licensed hazardous waste vendor (Shaanxi Hong'en Environment Technology Co., Ltd.). A designated HW warehouse (about 10 m^2) with secondary containment, weather-proof and waring sign provisions was established onsite. The corresponding HW contract and transfer manifests were provided for review.

Domestic Solid Waste Management

The solid wastes disposal methods are summarised below:

- Domestic wastes including domestic waste generated onsite and the solid waste from the coarse and fine screens, and waste packaging materials are collected and transported by the local sanitation station to local municipal domestic waste treatment facilities for landfill or incineration three times per week.
- Based on the EIA documents, municipal wastewater treatment sludge is not categorized as hazardous waste as per Chinese regulation. Sludge is dehydrated onsite to around 80% and is transferred by the sludge truck owned and operated by the subproject company to Qinjun Landscape Construction Co, Ltd. for incineration or making bricks. The corresponding contract and sludge transfer manifests were provided for review. SOP and safety guidelines were posted in the area.

Emergency Preparedness and Training

No Sudden Environmental or Safety Production ERP and the corresponding registration records were provided for review. Based on the management interview and document review, the EHS training and inspection records covering flood control drill, electric shock drill, daily onsite equipment safety inspection records, equipment maintenance records, and annual safety specification examination records were provided for review. In addition, the 2021 annual training plan covering wastewater discharge standard, operational manual, equipment management, equipment repair and maintenance, safety production, and safety operation in extreme weather was provided for review.

Fire-fighting equipment installed onsite include fire hydrants, fire distinguishers, fire water tank and pumps, emergency lights and evacuation signs. However, no fire-fighting equipment was placed in the chemical warehouse and HW warehouse. In addition, no regular inspection was conducted for all onsite fire-fighting equipment and no fire drill was conducted for all onsite employees in recent years.

Onsite Occupational Health and Safety

Based on document review and onsite observations, key occupational disease hazards identified at the Site included chemical exposure and noise. Noticeable noise was identified in the power generator room and ventilator room. The patrol inspection is carried out every two hours (lasts about 30 minutes per inspection). Proper PPE (including helmets, gloves, safety shoes, and masks), hazard warning signs, machine guards, insulation tools and production area monitoring cameras were provided at the Site. However, it was observed that only a few staffs wore PPE at the time of onsite visit. The occupational health check-ups are provided to the employees who are exposed to occupational disease hazards. In addition, routine medical check-ups are provided to all employees every year.

Specially, the COVID-19 prevention methods and procedure were established according to CCW corporate and local authorities' requirements. The COVID-19 prevention equipment, including masks, clinic thermometer, hand washing liquid and disinfection agent are provided onsite. In addition, management measures such as travel restriction, quarantine requirements, access registration, body temperature measuring as per the local authorities are also implemented by the Site.

Site management reported that no incidents/accidents have taken place to the onsite staff. According to the Site representatives and document review, the one operator involved in live-line work has obtained the Electrician Certificate for High-voltage electrical operation. It was identified a total of two sets of special equipment (two cranes) were used during the time of visit. The valid special equipment registration certificates, inspection reports and special equipment operator certificates were provided for review.

Community Occupational Health and Safety

Given no construction activities were conducted onsite, no population inflex was caused at the time of the audit. The health and safety risks exposed to surrounding communities mainly includes noise and odour during operation period, emergency accidents, traffic congestion and accident, and surface or underground water contamination. Mitigation measures were adopted as follows:

- The odour hazard is monitored regularly to ensure the compliance status.
- The wastewater treatment and anti-seepage measures are strictly complied with national regulations.
- Vehicle speed is controlled, and the truck used for sludge transportation is equipped with cover to prevent leakage of the sludge along the transportation route.

Electricity Supply

Based on the electricity fee provided by the Site, the 2020 electricity consumption (from January to November, as the data for December 2020 was not ready at the time of preparation of this report) for Xianyang WWTP is 4,274,279.73 kwh. The total electricity fee is RMB 2,134,799. There are no energy efficiency measures planned or in place.

Restricted Substances

No onsite sources of Asbestos Containing Materials (ACMs), Polychlorinated Biphenyls (PCB), Ozone Depleting Substances (ODSs) or radioactive materials were reported by Site management and none was observed at the Site by Stantec during the visit.

Notices of Violation

Based on desktop research, and interview with the Site management and Director of Inspection Team of local EEB, no nuisance or complaints regarding the site's noise and vibration, dust or other environmental aspects were identified.

Ecosystem

Given the treated wastewater can meet the Integrated Wastewater Discharge Standard of Yellow River Basin in Shaanxi Province (2018), the treated wastewater discharge is not expected to impact the aquatic ecosystem of the Wei River.

The design and construction of the WWTP has taken soil and groundwater impact into consideration. Concrete with impermeable layers have been applied to the construction of the WWTP. However, given Zerui, an industrial WWTP, is located and operating immediately to the north of Xianyang WWTP sharing portion of the land use right permit without a proper agreement, the liability of potential impact to the local soil and groundwater, if any, is not clearly defined.

The site area was a modified habitat prior to the construction of the Site, hence, biodiversity impact of the Site is considered limited. No protected fauna and flora were identified in the local area. Given the type of operation of the Site, the potential impact is considered limited.

Staff Capacity and Training

The Site provides two-level training to its new employees, namely plant-level and position-level, covering the SOPs, general plant rules and EHS aspects such as chemical handling (if needed), PPE, etc. In addition, the EHS training and inspection records covering flood control drill, electric shock drill, daily onsite equipment safety inspection records, equipment maintenance records, and annual safety specification examination records were provided for review. In addition, the 2021 annual training plan covering wastewater discharge standard, operational manual, equipment management, equipment repair and maintenance, safety production, and safety operation in extreme weather was provided for review.

Key EHS related findings and issues (apart from which mentioned in Section 3.3.1 and 3.3.2) were summarized as follow:

- No boundary noise monitoring was conducted in recent years.
- PPE was not properly worn by some of the operators onsite.

- No fire-fighting equipment was placed in the chemical warehouse and HW warehouse. In addition, no regular inspection was conducted for all onsite fire-fighting equipment and no fire drill was provided for all employees.
- The liability of potential impact to the local soil and groundwater, if any, between Zerui and Jinte, is not clearly defined.

3.4 SOCIAL ASSESSMENT

3.4.1 Land Acquisition and Resettlement

Jiangsu Bolong Environmental Protection Equipment Co., Ltd. (Bolong) reached a BOT agreement with local government in 2010 and established Shaanxi Jinte Water Purification Co., Ltd. (Jinte) which constructed the Site in 2012 and started operation in August 2014. Before the construction, Ms. Liang Qiuting, the general manager of Xianyang WWTP, introduced that the land acquisition was occurred in 2010 to 2011, conducted by Xianyang High-tech Industrial Development Zone BOLAR. The land acquisition impacted Guotang Village in Weibin Township of Qindu District and mainly impacted farmland, as well as some standing crop and land attachments. There was no physical displacement in this process. Ms. Liang also added that since the construction in 2012, Xianyang WWTP has not received any complaints related to land acquisition and resettlement.

Xianyang City BOLAR allocated the land with 53,368 m^2 (80 mu[3]) for the use of Xianyang WWTP and transferred the land to Jinte in 2013. In 2016, one other company, i.e. Xianyang Zerui Water Purification Co., Ltd. (Zerui) was established in the same compound, occupying 18,330 m^2 (27 mu) of the site land of Xianyang WWTP (please refer to ***Figure 3-2***). Zerui is also a municipal WWTP that receives industrial wastewater generated from the factories in the nearby industrial zone. The Site management reported that there is no business relationship between Xianyang WWTP and Zerui and the land occupation was required and arranged by the local government. There are no shared facilities between Xianyang WWTP and Zerui. Xianyang WWTP and Zerui share the land use certificate and pay land taxes corresponding to the portion of their occupations, respectively.

However, the following data gaps were identified with regard to the statements above:

- Ms. Liang Qiuting, the general manager of Xianyang WWTP reported that the documents related to land acquisition and compensation were kept by the local government and the officials of the land acquisition authority have been changed for several times in the past decade. Hence, no corresponding documents such as land acquisition impact rosters, compensation agreement, compensation payment voucher, etc. were provided for review and no corresponding interview was arranged during Stantec's site visit.
- Reportedly the Site land affected village had been relocated as a whole due to other project, hence, no corresponding interview with the PAHs or village committee was arranged during Stantec's site visit.
- There was no written agreement such as land lease agreement signed between Xianyang WWTP and Zerui.

Key social related findings and issues were summarized as follows:

- No documents (such as asset inventory, compensation agreement, etc.) regarding Phase I development land acquisition were held by Xianyang WWTP. There is no in-place procedure to document land acquisition activities, as well as monitor and evaluate the payment status, which is a non-conformance against ADB SR2.

[3] Mu is the Chinese land area unit, and one mu is approximately equal to 666 square meters.

- Xianyang WWTP and Zerui share the same land use certificate, operating different facilities in the same compound, whilst no documentation can clearly define the land occupation and corresponding liabilities.

3.4.2 Indigenous People

The Site is located in Qindu District of Xianyang City. The ethnic Han is predominant in PRC as well as in the local area and there are no ethnic minority residential areas were identified or affected. In addition, no ethnic minority households are expected to be impacted by the Site development scheme. Therefore, ADB SR3 is not triggered for the Site.

3.4.3 Stakeholder Engagement and Consultation

It is identified no stakeholder analysis has been conducted for Xianyang WWTP and no document records regarding stakeholder engagement were available for review.

According to interview with CCW's corporate, Stantec's onsite consultation, as well as similar project experience, three major stakeholder groups are identified for this type of project, including (a) government authorities, such as Qindu District EEB and Emergency Management Bureau, (b) local community (wastewater discharge unit / individual), including Gaoxin Jinye No. 1 Community (which is as per the local planning established by the local government, one residential area. Gaoxin Jinye No.1 Community is located approximately 90 m to the east of the Site and is a breach of the buffering zone of the Site. At the time of the site visit this residential area was under construction), Weibin Central Kindergarten, etc., (c) local residents affected by land acquisition, i.e.Guotang Village. Xianyang WWTP is responsible for liaison with local government.

The Site is following PRC's laws and regulations. In China, consultation with the local communities is a regulatory requirement during the process of EIA as well as land acquisition and resettlement. One full EIA report was developed for the Phase I development in 2009. A total of 94 local residents were consulted through questionnaire survey while preparing the EIA Report. Among the interviewees, 91.5% expressed support to the Site, while 8.5% expressed not concerned. No interviewees expressed objection.

Key social related findings and issues were summarized as follow:

- There is no formalized stakeholder engagement procedure established for Xianyang WWTP to manage stakeholder identification, analysis, engagement especially for dealing with those concerns related with land acquisition and resettlement, and other community affairs.

3.4.4 Grievance Redress

It was identified there are no grievance procedures or designated personal for managing the grievances of employees, local communities and other stakeholders. No records of grievances are available for review.

For the workers' grievances, the site management reported that the workers usually may file a grievance to the HR directly, if the HR cannot address the grievance, it will be reported to the site general manager. Usually, employees' complaints can be properly resolved at the HR level, and according to Ms. Liu from HR department of the Site, there are no grievances reported to date.

For the community grievances, the management reported that they have not received any grievances directly so far, the grievances (if any) raised by the local communities would normally be received by the local government. The subproject company would be informed by the local government in case

grievances received. The representative from the Environmental Inspection Team of local EEB also stated that no complaints from the local community has been received since the operation of Xianyang WWTP. No grievance has been received to date reportedly.

Key social related findings and issues were summarized as follow:

- There is no system in place to record and track the complaints raised by the local community, employees and construction workers during construction and operation phases, which is a non-conformance against ADB safeguards.

3.4.5 Labour and Social Protection

At the time of onsite visit, there were 27 employees directly hired by the Site, including one general manager, one deputy general manager, one technical manager, nine operational staff, four maintenance staff, two laboratory staff, four sludge staff, two financial staff, one chef, one greening staff and one driver. All the 27 employees are formal contracted workers and no temporary, dispatching, and outsourcing workers were identified at the Site. All the 27 employees are Han Chinese, 7 out of 27 are female and the rest 20 employees are male.

Reportedly, the workers except for the operating workers are typically working in one shift (8:30~12:00 and 13:00~17:30) every day, five days a week. The nine operating workers were divided into three groups with two shifts (8:30~20:30 and 20:30~8:30 respectively). Each shift had three responsible staff. The Site adopts the comprehensive working hour system for operating workers, however, no approval from the Labour Bureau were provided for review. Wages are paid on the next 15th of each month. The Site provided the payroll records in December 2020 for all 27 employees for review. The payroll record includes working hours and overtime, normal wage, overtime wage and social insurance. The normal wages for workers were above the minimum wage requirement.

No underage or juvenile workers were identified onsite. No sexual harassment or discrimination was identified during onsite interview. The worker's union was established by Xianyang WWTP and all 27 employees of the Site are members of the workers' union.

Key social related findings and issues were summarized as follow:

- The WWTP adopts the comprehensive working hour system for operating workers, however, no approval from the labour bureau were provided for review. This is a non-compliance against PRC regulations.

3.4.6 Gender and Development

Although there are no specific procedures regarding gender and development identified in any of the Site's existing policies and procedures, no indication of gender inequality or discrimination is identified from document review and interview.

To date, 7 out of the 27 workers at the Site companies are female, including one general manager, one operational staff, two laboratory staff, two financial staff and one chef. The males are skilled workers primarily focusing on engineering, whilst most females on non-engineering positions such as administration and logistics. The consulted female employees are treated equally in payment, training and promotion. All the female employees at the Site are entitled to the same specific benefits (98 days of maternity leave, women's toilets, and small gifts on Women's Day) as other females in the Company. Stantec's interview with randomly selected operators did not identify any concern over gender composition of the positions.

SITE ASSESSMENT

No noncompliance regarding gender and development was identified against either the PRC regulations or ADB SPS for the Site. In addition, according to consultation with both site management and the randomly selected workers, no disproportionate impacts were caused by the Site on women.

4. CORRECTIVE ACTION PLAN

Table 4-1 summarises the E&S issues identified at Xianyang WWTP. As implementing the actions described below might signify economic costs to different degrees, estimations were not made.

Table 4-1: Xianyang WWTP - Findings and Recommended CAP

No.	Applicable E&S Standards	Theme	Description of Issue(s)	Suggested Corrective Action(s)	Risk Level	Suggested Time Frame	Completion Indicator(s)
1	ADB SPS 1 and 2	E&S Management	At the time of the site visit, a formal Environmental and Social Management System (ESMS) was not developed onsite. Environmental procedures such as chemical management, environmental monitoring management, solid waste management, etc. were not in place.	Upon completion of development of the corporate ESMS, the Site should seek for assistance from the CCW corporate and developed its own subproject level ESMS covering EHS, HR and Social aspects. The subproject level ESMS should be implemented by qualified and trained onsite personnel.	High	1 month after adoption of corporate level ESMS [6 months after ESMS adoption]	Development and adoption of Subsidiary level ESMS ESMS implementation and training record Updates in the annual E&S performance report to ADB on the effectiveness of ESMS implementation
2	ADB SPS 1	EHS Permit	The ECAI for the Phase I development upgrade has not been conducted.	The Site should engage a qualified third party to prepare the corresponding ECAI document and disclose it.	Medium	Prior to disbursement 6 months after disbursement	Contract/agreement with qualified third party ECAI document
3	ADB SPS 1	EHS Permit	The PDP was not updated since the Phase I development upgrade completed in 2020.	The Site should consult with the local EEB in this regard and take action accordingly.	Medium	6 months after disbursement	PDP or communication records

CORRECTIVE ACTION PLAN

No.	Applicable E&S Standards	Theme	Description of Issue(s)	Suggested Corrective Action(s)	Risk Level	Suggested Time Frame	Completion Indicator(s)
4	ADB SPS 1	EHS Permit	The Site uses one onsite groundwater abstraction well (with a depth of 30 m) without a Water Abstraction Permit.	The Site should consult with the local Water Resource Bureau in this regard and either apply for a Water Abstraction Permit, or use municipal tap water instead.	Low	Prior to disbursement 3 months after disbursement	Communication records of consultation with Water Resources Bureau on next steps Water Abstraction Permit
5	ADB SPS 1	EHS Permit	No Work Safety Assessment was provided for review.	The Site should consult with the local Emergency Management Bureau in this regard and take action accordingly.	Low	Prior to disbursement 3 months after disbursement	Communication records of consultation with the Emergency management Bureau on next steps. Work Safety Assessment
6	ADB SPS 1	Emergency Response	No Sudden Environmental or Safety ERP and the corresponding registration record were provided for review at the time of audit.	The Site should consult with the local EEB and Emergency Management Bureau in this regard and take action accordingly. As a minimum, the ERPs should include fire, chemical leakage, incidental discharge and flooding scenarios.	Medium	Prior to disbursement [same time as ESMS] 6 months after disbursement	Communication records of consultation with the EEB and Emergency management Bureau on next steps ERP and the Supplementary ERP included in the Subsidiary level ESMS ERP registration record and drill records
7	ADB SPS 1	Pollution Prevention	No boundary noise monitoring was conducted in recent years.	The Site should engage licensed third parties to conduct periodic	Medium	Prior to disbursement	Contract/agreement with licensed third party

CORRECTIVE ACTION PLAN

No.	Applicable E&S Standards	Theme	Description of Issue(s)	Suggested Corrective Action(s)	Risk Level	Suggested Time Frame	Completion Indicator(s)
		and Abatement		boundary noise monitoring and ensure the compliance status as per the PDP.		[same time as ESMS] 3 months after disbursement	Environmental Monitoring procedures as part of the Subsidiary level ESMS Boundary noise monitoring reports
8	ADB SPS 1	Health and Safety	PPE was not properly worn by some of the operators onsite.	The Site should strengthen the implementation of PPE and inspection.	Low	3 months after disbursement	Inspection records and training records
9	ADB SPS 1	Health and Safety	No fire-fighting equipment was placed in the chemical warehouse and HW warehouse. In addition, no regular inspection was conducted for all onsite fire-fighting equipment, and no fire drill was conducted for all employees.	The Site should provide fire-fighting equipment in the chemical warehouse and HW warehouse, and conduct fire-fighting equipment inspection and training/drill in a regular basis.	Low	Prior to disbursement	Onsite Photos and Inspection records
10	ADB SPS 1	Soil and Groundwater Impact	Given Zerui, an industrial WWTP, is located and operating immediately to the north of Xianyang WWTP sharing portion of the land use right permit without a proper agreement, the liability of potential impact to the local soil and groundwater, if any, is not clearly defined.	The Site should communicate and reach an agreement with Zerui in regard to the liability of potential soil and groundwater impact caused by operations of WWTPs. The Site can consider conduct a soil and groundwater investigation to develop a baseline and identified potential impact, if any, of the local soil and groundwater condition.	Low	6 months after disbursement	Liability defining agreement

CORRECTIVE ACTION PLAN

No.	Applicable E&S Standards	Theme	Description of Issue(s)	Suggested Corrective Action(s)	Risk Level	Suggested Time Frame	Completion Indicator(s)
11	ADB SPS 2	Involuntary Resettlement	No documents (such as asset inventory, compensation agreement, etc.) regarding Phase I development land use for the Site were provided for review.	Upon development and implementation of the corporate ESMS, the Site should follow the corporate Resettlement Policy Framework to document the compensation payment and evaluate its status.	Medium	9 months after disbursement	Relevant documents
12	ADB SPS 2	Involuntary Resettlement	Xianyang WWTP and Zerui share the same land use certificate, operating different facilities in the same compound, whilst no documentation can clearly define the land occupation and corresponding liabilities.	Upon development and implementation of the corporate ESMS, the Site should communicate with the local government with regard to the situation of the current land use certificate and seek for opportunity to divide the land use certificate based on the actual land occupation.	Medium	9 months after disbursement	Updated Land Use Certificate reflecting the actual land occupation of the Site
13	ADB SPS 2	Stakeholder Engagement	There is no system/ procedure in place to guide the Site to identify stakeholders, make analysis, and conduct engagement.	Upon development and implementation of the corporate ESMS, the Site should develop a procedure as part of E&S for the purpose of managing stakeholder engagement process.	Low	[same time as ESMS]	A stakeholder engagement plan (SEP)
14	ADB SPS 2	Grievance Redress	There is no system in place to record and track the complaints raised by the local community, employees and construction workers during construction and operation phases. Thus, no record of previous grievances was available for review.	Upon development and implementation of the corporate ESMS, the Site should develop a site-specific grievance redress procedure to collect and document any complaints and grievances raised by the employees and the broader local community.	Low	[same time as ESMS]	Site specific grievance mechanism (including the employees and the local community) and grievance records

CORRECTIVE ACTION PLAN

No.	Applicable E&S Standards	Theme	Description of Issue(s)	Suggested Corrective Action(s)	Risk Level	Suggested Time Frame	Completion Indicator(s)
15	Social Protection	Labour and Social Protection	The Site adopts the comprehensive working hour system for operating workers, however, no approval from the Labour Bureau were provided for review.	The Site should consult with the local Labour Bureau and apply for the approval of Comprehensive Working Hour as appropriate.	Low	6 months after disbursement	Communication records and/or approval of Comprehensive Working Hour

Annex A: LIST OF DOCUMENT REVIEWED

No.	Name
1	Site Selection Application approval was approved by Xianyang Housing and Urban-Rural Development Bureau on 21 December 2010
2	FSR approval for the Phase I and Phase II developments issued by Xianyang Development and Reform Commission on 29 December 2009
3	FSR approval for the Phase I development upgrade issued by Xianyang Hi-tech District Economic Development Bureau on 19 July 2019.
4	EIA approval for the Phase I and Phase II developments issued by the Xianyang EEB on 17 December 2009
5	ECAI approval for the Phase I development issued by the Xianyang EEB on 26 August 2014.
6	EIA report and approval for Phase I development upgrade the upgrade issued by the Xianyang Hi-tech District EEB on 15 November 2019
7	PDP issued by Xianyang EEB valid from 4 July 2019 to 3 July 2022
8	Sampled environmental monitoring reports (regarding treated wastewater and fugitive air) dated 2020
9	HW Disposal Contract for waste machine oil, waste liquid from the laboratory, gloves and empty chemical containers, signed with Shaanxi Hongen Environmental Technology Co., Ltd., valid from 28 April 2020 to 27 April 2021.
10	Sampled HW transfer manifest dated 2020
11	Sludge Disposal Contract signed with Qinjun Landscape Construction Co., Ltd., valid from 25 May 2020 to 24 May 2021.
12	Sampled sludge Transfer Manifests dated 2020.
13	Sampled precursor chemicals registration records dated 2020
14	FCAI Registration Record issued by Fire-fighting Brigade of Xianyang City Public Security Bureau, dated on 23 July 2015.
15	The valid special equipment registration certificates, inspection reports and special equipment operator certificates were provided
16	Shaanxi Province Lightning Protection Device Acceptance Opinion issued by Xianyang Meteorological Bureau, dated 07 November 2014.
17	Industrial Hygiene (IH) Monitoring Report regarding workplace air and noise prepared by dated 25 December 2020.
18	Occupational Health Hazards Status Quo Assessment Report prepared by Shaanxi Zhonghuan Testing Service Co., Ltd. dated December 2020.
19	Sampled on the job occupational health check-up report dated 2020
20	Emergency response plans dated 2020
21	EHS management procedures and training records.
22	Reply on the Pre-approval Opinions of Construction Project Land issued by Xianyang City BOLAR (Bureau of Land and Resources) on 7 January 2011.
23	Construction Land-use Certificate of area 53,368 m2 (80 mu) for the Phase I Development issued by Xianyang City Bureau of Land and Resources on 30 May 2013.
24	One labour contract sample signed on 22 October 2020.
25	Employee handbook developed on 1 February 2019.
26	Payroll records in December 2020

Annex B: STAKEHOLDERS ENGAGED DURING THE E&S Audit

Name	Category	Department	Title
Ms. Liang Qiuting	Internal	Management Team of the Site	General Manager
Mr. An Mengchun	Internal	Management Team of the Site	WWTP Director
Mr. Wang Song	Internal	Management Team of the Site	Manager of Production Department
Mr. Liu Jie	Internal	Management Team of the Site	HR manager
Mr. Zhang	External	Environmental Inspection Team of EEB	Director

Annex C: PHOTO LOG

Photo Log – Xianyang WWTP	
	
Photo 1 Entrance of the Site	Photo 2 Wastewater Inlet of the phase I development

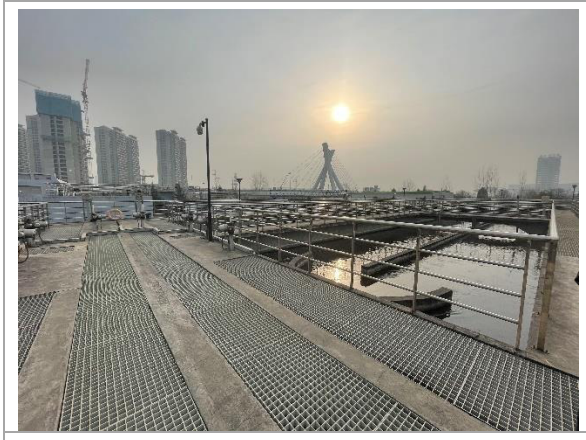



Photo 3 Biological Tank for phase I development	Photo 4 Secondary Sedimentation Tank for phase I development
	
Photo 5 Chemical Warehouse for phase I development	Photo 6 HW Warehouse for phase I development

Annex C: PHOTO LOG

Photo Log – Xianyang WWTP	

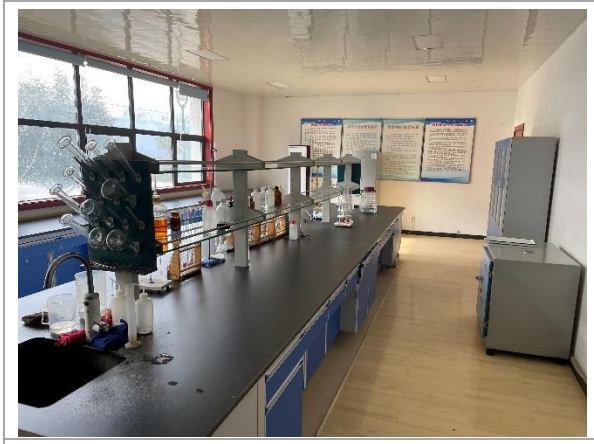



Photo 7 Laboratory for phase I development	Photo 8 Online Treated Wastewater Monitoring Device
	
Photo 9 Wastewater Outlet Online Monitoring Room	Photo 10 PPE warning sign
	
Photo 11 PPE	Photo 12 Emergency Light

Annex C: PHOTO LOG

Photo Log – Xianyang WWTP	
	
Photo 13 Gaoke Road is located immediately to the east of the Site	Photo 14 West side of factory boundary: abandoned factory
	
Photo 15 Zerui's operating facilities are located immediately to the north of the Site	Photo 16 Overview of Weibin Middle School