

Environmental Monitoring Report

Project Number: 52026-001
Semi-annual Report (July–December 2022)
January 2023

People's Republic of China: Anhui Huangshan Xin'an River Ecological Protection and Green Development Project

Prepared by Huangshan Project Management Office for the Huangshan Municipal Government
and the Asian Development Bank.

Asian Development Bank

CURRENCY EQUIVALENTS

(as of 31 December 2022)

| | | |
|---------------|---|------------|
| Currency unit | – | Yuan (CNY) |
| CNY1. 00 | = | € 0. 1347 |
| €1. 00 | = | CNY 7.4229 |

ACRONYMS AND ABBREVIATIONS

| | | |
|------|---|---|
| ADB | - | Asian Development Bank |
| CSC | - | Construction Supervision Company |
| EA | - | Executing Agency |
| EEB | - | Ecology and Environment Bureau |
| EHS | - | Environmental, Health and Safety |
| EIA | - | Environment Impact Assessment |
| EMA | - | External Monitoring Agency |
| EMP | - | Environmental Management Plan |
| EMR | - | Environmental Monitoring Report |
| ESMS | - | Environmental and Social Management System |
| GAP | - | Gender Action Plan |
| GIF | - | Green Investment Fund |
| GRM | - | Grievance Redress Mechanism |
| HMG | - | Huangshan Municipal Government |
| HPMO | - | Huangshan Municipal Project Management Office |
| HTIC | - | Huangshan Trust and Investment Corporation |
| HXIC | - | Huangshan Xintou Investment Corporation |
| KfW | - | Kreditanstalt für Wiederaufbau |
| IA | - | Implementing Agency |
| IEE | - | Initial Environmental Examination |
| LIEC | - | Loan Implementation Environment Consultant |
| MIS | | Management Information System |
| PAM | - | Project Administration Manual |
| PMO | - | Project Management Office |
| PRC | - | People's Republic of China |
| RP | - | Resettlement Plan |
| SME | - | Small and medium-sized enterprise |
| SPS | - | Safeguard Policy Statement |
| TA | - | Technical Assistance |
| WWTS | - | Wastewater Treatment Station |
| YREB | - | Yangtze River Economic Belt |

This environmental monitoring report is a document of the borrower. The views expressed herein do not necessarily represent those of ADB's Board of Directors, Management, or staff, and may be preliminary in nature.

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SUMMARY PROJECT INFORMATION

| GENERAL INFORMATION | |
|--|--|
| Project title: | Anhui Huangshan Xin'an River Ecological Protection and Green Development Project |
| Date of project effectiveness: | 25 September 2020 |
| Executing agency: | Huangshan Municipal Government |
| Implementing agency: | Huangshan District Government Huizhou District Government Tunxi District Government Xiuning County Government She County Government Yi County Government Qimen County Government Huangshan Xintou Investment Corporation and their respective Project Implementing Units |
| PMO (name of agency): | Huangshan municipal project management office |
| PMO Environment Officer (name, email): | Mr. Yin Quan, Tel: 0559-2355872, Email: hsshxmb@126. com |
| Loan implementation consultant / firm: | ESD |
| LIEC: | Mr. Zhang Defa, ESD |
| ADB web link to EMP: | https://www.adb.org/sites/default/files/project-documents/52026/52026-001-iee-en_0.pdf |
| Domestic web link to EMP: | http://fgw.huangshan.gov.cn/tzgg/8879220.html |
| ENVIRONMENTAL SAFEGUARD MONITORING | |
| ADB environment safeguard category: | B |
| Environmental report prepared as per ADB requirements for this category: | Initial Environmental Examination |
| Domestic safeguard report: | Project EIA |
| Quarterly period covered by this report: | 1 July to 31 December 2022 |
| # EMRs to date including this report: | 5 |
| Agency/person responsible for | Seven district or county IA and Construction Supervision |

| | |
|---|---|
| internal environmental monitoring: | Company |
| Agency/person responsible for external environment monitoring: | Huangshan Angel Environmental Monitoring Co. , Ltd |
| Agency/person responsible for EMP implementation and progress monitoring: | Mr. Zhang Defa, LIEC from ESD |
| Agency/person responsible for independent compliance monitoring: | This is environment safeguard category B project. No independent compliance monitoring for this project is required |
| Overall status of environmental safeguards: | On track |

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EXECUTIVE SUMMARY

1. **Overview.** This semi-annual report presents the status of compliance with the environment management plan (EMP) during the project implementation covering the reporting period from 1 July 2023 to 31 December 2022.
2. **Institutional setup.** The environment persons of the project agencies have been appointed. For this reporting period, PMO, Huangshan Trust Investment Group/Huangshan Trust Investment Corporation (hereinafter referred to as HTIC/HXIC) respectively designated qualified environment person to be responsible for coordinating the implementation of safeguard and environmental management requirements, and there has been no changes or adjustment in environment person in-charge compared from previous reporting period. Each of the contractors, the construction supervision companies have assigned qualified environmental personnel to coordinate the implementation of environmental management, monitoring and reporting requirements during construction period. Eight completed civil works subprojects have been handed over to local authorities and townships for O&M¹.
3. **Contractual arrangement.** HPMO has distributed the EMP to respective County PMOs, IAs and design institutes. Relevant environmental requirements have been included in the bidding documents, civil works contracts with contractors and supervision contracts with construction supervision companies. The contractual arrangement is fully in compliance with the EMP.
4. **Implementation of mitigation measures.** The contractors have prepared site environment, occupational health, and safety management plans. These site management plans have been properly implemented by contractors. During the reporting period, the mitigation measures before/during/after construction are well implemented based on EMP and domestic environmental requirements, which were strictly monitored and complied with by PMOs, with the assistance of consultants. The completed civil works subprojects has been gradually carried out trial operation, as well as the follow-up handover and O&M. The implementation of mitigation measures are in compliance with the EMP requirements.
5. **Implementation of GIF is being conducted.** (i) The HTIC had arranged appointment for environmental and social officers with three environmental officers (of which two majored in environmental sciences) and three social officers (of which majored in social sciences) for management of the implementation of ESMS. Through on-job trainings provided by LIEC every year, these staff demonstrated good understanding of their responsibilities and requirements of ESMS and have gained practical experience during implementation of ESMS. Appointed officers are familiar with the ESMS-six steps however requires supplemental training to ensure capacities on updating REA checklist and full comprehension of technical terms used. (ii) The HTIC has issued a formal Presidential Directive and integrated the ESMS within HTIC business procedures in September 2020. (iii) Total of 5 sub-projects have been evaluated, 1 subproject (Yixian Younong) was selected and under implementation, 1 sub-projects (Huangshan Tianzhidu) was selected but has not sign contract, 1 subproject (Huangshan Mijing Tourism) is selected for further due diligence, and 2 subprojects (Huangshan Guoda and She County Tourism) were dropped. The first GIF project was carried out smoothly, and the investment

¹ For this project, an environmental acceptance report will be prepared upon project completion i.e., upon completion of all subprojects and components. Details will be included in subsequent EMRs, as applicable.

project activities were implemented in strict accordance with the requirements of ESMS. During the process, HTIC/HXIC took excellent management and monitoring measures, and submitted a semi-annual GIF implementation progress report as required (see Appendix 6). The second GIF project - Huangshan Tianzhidu Environmental Technology Development Co., LTD (Huangshan Tianzhidu) -- technology R&D and industrialization project has been approved by ADB.

6. **Internal monitoring** (i) Regular site inspections have been performed by the CSCs on a daily basis; (ii) Regular site inspections have been performed by the IAs' Environment Officer with assistance of CSCs on a weekly basis. The internal monitoring results have been prepared by the CSCs and submitted to IAs for review on a monthly basis (iii) random site inspections performed by HPMO and CPMOs. The consulting company carried out on-site EHS supervision in daily management, and introduces ADB's environmental management policies and EMP to the construction participants. A total of 6 times (once a month) on-site supervision in this half year conducted. No environmental pollution, health and safety accident and/or incident was recorded during the second half of 2022.

7. **External monitoring** was carried out as per EMP requirement, and the results comply with the relevant standards defined in the IEE. Huangshan Angel Environmental Monitoring Co., Ltd. was requested to conduct the onsite environment monitoring in the second half of 2022 and the results were issued in December 2022. The monitoring results in construction period and operation period comply with the EMP and domestic environmental protection requirements. This represents the completed civil works namely Works-HS-4, Works-HZ-1, Works-HZ-2, Works-SX-5, Works-TX-1, Works-TX-2, Works-TX-3, Works-YX-1. During the reporting period, the PMOs, the IAs and consultants visited the project sites regularly. It was observed that the mitigation measures were effectively implemented and project related activities were in compliance with EMP requirements. The noise environment and ambient air quality during construction and operation meet the requirements of domestic environmental protection standards stipulated in IEE and EMP. Monitoring activities conducted were carried out in accordance with EMP-5: Environmental Monitoring Program.

8. **Public participation and Grievance Redress Mechanism (GRM).** Public engagement and participation activities have been implemented before/during construction by IAs, design institutes, and contractors. An on-site survey on the environmental, social and resettlement of the affected people in the affected villages/ communities involved in the newly started civil work subproject (i.e., for subprojects XN-3~7, SX-2, 7, 9, HS-3) has been conducted by IAs in the second half of 2022. During the construction period, project related construction information and environmental and social grievance redress channels were disclosed and published in each village adjacent to construction sites. Environmental information board has been set up at the construction site, and established the " Five information boards and One Map (project description board, management personnel list and supervision telephone board, fire protection and security board, safety production board, civilized construction board and general layout map of construction site", which contains the data and contact information of managers and a special plan of production safety and environmental protection in accordance with domestic environmental protection requirements. No complaints were received up to the end of December 2022.

9. **Training and capacity-building.** For the second half of 2022, with the assistance of consultants, the Municipal PMO organized monthly on-site environmental and occupational

health and safety trainings. In parallel, the appointed consultants effectively carried out training on EMP implementation per EMP-6 (Project Environment Training Program). On August 17, 2022, environmental specialist of the consulting company, with the relevant responsible personnel of HTIC, visited the proposed investee -- Huangshan Tianzhidu to provide training on environmental protection requirements of GIF fund. Further, the investee (Younong company) carried out various kinds of safety production and technical training on agricultural production, agricultural machinery operation, etc.. In addition, the training of on-site construction management by supervisors covered the requirements of environmental management .

10. **Compliance with covenants of Loan Agreement (LA).** The implementation activities of the EMP complied with the covenants of environmental safeguard clauses of LA.

11. **Follow-up of issues documented in MOU.** Actions for the reporting period proposed in the MOU of ADB and KfW review mission in August 2022 are being implemented/have been completed as required including: (i) Submission the fourth Semi-annual environment monitoring report (EMR) is completed in August 2022, ii) Submission the 5th Semi-annual environment monitoring report (EMR) is completed in February 2023, (iii) Draft DEIA for project scope change is completed in February 2023, ongoing revisions; (vi) IEE addendum and updated EMP is under preparation and will be submitted to ADB by 31 March 2023; (v) ESMS updates is under preparation and will be submitted to ADB by 31 March 2023; (vi) EMP and ESMS implementation training are being implemented.

12. **Lessons learned and next steps.** Lessons learned during the reporting period includes: a long time will be taken (at least six months) after the completion of a civil work contract for the final settlement and transfer of ownership. During this period, some equipment that needs continuous O&M may face long-term lack of management and substandard O&M due to delayed transfer of asset ownership and insufficient capacity of township administrations that receive the assets. In view of this, the district and county governments and the PMO will provide more support for O&M in the future to solve the problem.

13. **With regards to the ESMS implementation** i) In accordance with the implementation steps of ESMS, continue to track, monitor and report all sub-projects, ii) urge sub-projects to continue to pay attention to and implement EMP in activities; iii) training of stakeholders, especially the staff of the implementing agency and the staff of sub-projects, should be strengthened to apply ESMS steps for screening, identification and post-investment management of sub-projects; iv) Strengthen information dissemination and training: Continue to promote the understanding of implementing agency staff and sub-project staff about the overall project and requirement of EMP/ESMS. v) Complete the signing of the second investment sub-project contract and the payment of investment funds.

14. **Next steps include:**

- Continue to implement projects in accordance with EIA/EMP requirements during the whole project implementation;
- By March 2023, complete updating domestic EIA and EMP covering Project adjustments as discussed during the August 2022 ADB mission;
- By March 2023, carry out the required public consultation during preparation of the updated EIA/EMP;

- Carry out information disclosure and dissemination during preparation of DEIA, and provide construction site through environment information boards;
- The HTIC will provide training to stakeholders, especially the staff of the implementing agency and the staff of sub-projects on how to apply ESMS steps for screening, identification, and post-investment management of sub-projects once the HTIC signed contract with the sub-project IA.
- update ESMS to address ADB comments and recommendations. This includes preparation of the subproject / activity specific REA / worksheets for any new type of subproject using GIF fund, e.g., Huangshan Mijing Tourism subproject.
- submit IEE addendum and update EMP before 31 March 2023
- submit next EMR covering the period of January 2023 to June 2023 by 31 July 2023.

I. INTRODUCTION

A. Purpose of report

15. The purpose of this environmental monitoring report (EMR) is to describe and assess progress for implementation of the environmental management plan (EMP) for the Anhui Huangshan Xin'an River ecological protection and green development project, covering the reporting period from 1 July 2022 to 31 December 2022. This EMR is submitted in compliance with the Safeguard Policy Statement (SPS) of the Asian Development Bank (ADB) and the loan agreement between ADB and the project executing agency.

16. This is the 5th EMR for the project. It covers the bidding and construction phases of the project. The report describes: (i) project readiness with respect to fulfilling environmental requirements (ii) implementation of mitigation measures; (iii) monitoring activities; (iv) public consultations and including grievance redress; (v) training and capacity building; (vi) reporting; and (vii) an overall assessment of key achievements, challenges, issues, corrective actions, and lessons learned, during the reporting period.

B. Project outcomes and outputs

17. The project is aligned with the following impact: sustainable economic growth and environmental improvement in the Yangtze River Economic Belt(YREB) achieved. The project will have the following outcome: economic and environmental conditions in the upstream of Xin'an River improved.

18. The project is expected to produce four outputs, namely,

- **Output 1: Urban point source pollution management facilities upgraded.** This output will include (i) sewage and storm water management through upgrading the existing centralized sewerage systems in Huangshan's central district and four county Urban Areas; and (ii) river rehabilitation and flood control through river embankment.
- **Output 2: Rural point and non-point source pollution control facilities and systems enhanced.** Innovative approaches supporting green agricultural and ecological practices will be adopted. This includes point and non-point source pollution controls through (i) decentralized sewage and on-site treatment system and environment management in rural villages; (ii) changing fertilizer application practices, including the improved use of organic fertilizer and biological pesticides with low toxicity at agricultural and forestry sites; and (iii) improvement of pine forest conditions through disease monitoring and prevention.
- **Output 3: Green financing mechanisms piloted.** This includes the establishment, piloting and operationalization of a (i) Green Incentive Fund to encourage farmers to adopt sustainable farm management practices to address agricultural non-point source pollution in Huangshan; and (ii) green investment fund to invest in SMEs involved in green business.
- **Output 4: Capacity for ecological system and project management strengthened.** This will enhance HMG's capacity in water resources and flood forecasting management in the Xin'an River Basin. This includes (i) establishing environmental,

health, and safety management systems to strengthen its industrial and urban environmental monitoring and emergency response capacity; (ii) integrated smart¹⁰ MIS; (iii) studies on Huangshan city green development strategy, eco-compensation mechanisms, rural wastewater discharge standards, and green farming certification; and (iv) HMG implementation support and capacity development.

C. Project implementation progress

19. The date of project effectiveness is 25 September 2020. As of 31 December 2022, all existing 26 civil construction contracts were awarded. Among them, eight have been completed and the remaining eighteen civil contracts are at different construction stages. Implementation progress for subcomponents is summarized in Table 1.

Table 1: Implementation Status of Civil Work Contracts, as of 31 December 2022

| No. | Contract Name | Contract Content | Contract Status | Date of Constr. Started | Contractor | Supervisor | Implementation Description |
|-----|---------------|--|--------------------|-------------------------|--|--|---|
| 1 | Works-HS-1 | Xinhua Village Green Agriculture Demonstration Project in Huangshan District | Under Construction | 2021/6 | Fujian Yuchen Construction Co., Ltd | Chuangda Consult Ltd | Approximately 95% of works completed |
| 2 | Works-HS-2 | Sewage and Stormwater Sewer Upgrade Project in Huangshan District | Under Construction | 2021/6 | Jiangsu Shuigong Construction Co., Ltd | Anhui Chizhou Jiuhua Engineering Consulting Co., Ltd. | Approximately 95% of works completed |
| 3 | Works-HS-3 | Xinhua Village Environment Improvement Project in Huangshan District | Under Construction | 2022/5 | Zhongdi Yingang Construction Group Co. LTD | Zhongxin Chuangda Consulting Co. LTD | Approximately 50% of the project is completed |
| 4 | Works-HS-4 | Caocun River Rehabilitation Project in Huangshan District | Completed | 2020/12 | Zhejiang Jiuhe Environmental Co., Ltd | Hubei Three Gorges Construction Project Management Co. LTD | Construction Completed |
| 5 | Works-HZ-1 | Sewage and Stormwater Sewer Upgrade Project in Huizhou District-1 | Completed | 2021/3 | Shanhu Construction Group Co., Ltd | Anhui Hengzheng Construction Project Management Co. LTD | Construction Completed |
| 6 | Works-HZ-2 | Village Environment Improvement Project in Huizhou District | Completed | 2021/3 | Kunpeng Construction Group Co., Ltd | Jiangsu Yutian Engineering Consulting Group | Construction Completed |
| 7 | Works- | Sewage and Stormwater Sewer Upgrade Project in | Under Construction | 2021/9 | Anhui Xinjian Holding | Anhui Hengxin Construction | Approximately 95% of |

| No. | Contract Name | Contract Content | Contract Status | Date of Constr. Started | Contractor | Supervisor | Implementation Description |
|-----|---------------|---|--------------------|-------------------------|---|---|--|
| | QM-1 | Qimen County-1 | | | Group | Engineering Management Co. , Ltd | works completed |
| 8 | Works-QM-2 | Sewage and Stormwater Sewer Upgrade Project in Qimen County-2 | Under Construction | 2022/2 | Shanhu Construction Group Co., Ltd | Anhui Hengxin Construction Engineering Management Co. , Ltd | Approximately 70% of works completed. |
| 9 | Works-SX-1 | Sewage and Stormwater Sewer Upgrade Project in She County-1 | Under Construction | 2021/4 | China Petroleum Pipeline Engineering Co., Ltd | Jianjing Investment Consulting Co., LTD | Approximately 80% of works completed |
| 10 | Works-SX-2 | Sewage and Stormwater Sewer Upgrade Project in She County-2 | Under Construction | 2022/6 | Tianjin Pipeline Engineering Group Co., Ltd. | | Approximately 90% of works completed |
| 11 | Works-SX-5 | Xitou Village Environment Improvement Project in She County-2 | Completed | 2021/6 | Xingrun Construction Co., Ltd | | Physical work completed – also refer to paragraph 2 for details. |
| 12 | Works-SX-6 | Xitou Village Environment Improvement Project in She County-1 | Under Construction | 2021/6 | Tianjin Pipeline Engineering Group Co., Ltd | | Approximately 95% of works completed |
| 13 | Works-SX-7 | Environmental Infrastructure Improvement along Xin'an River in She County | Under Construction | 2022/6 | Shanhu Construction Group Co., Ltd | | Approximately 50% of works completed |
| 14 | Works- | Xi'an River Green Agriculture | Under Construction | 2021/12 | Gorden Road Group & | | Approximately 90% of |

| No. | Contract Name | Contract Content | Contract Status | Date of Constr. Started | Contractor | Supervisor | Implementation Description |
|-----|---------------|---|--------------------|-------------------------|---|---|---|
| | SX-8 | Demonstration Project in She County | | | Zhejiang Jiuhe Environment Co.,Ltd | | works completed |
| 15 | Works-SX-9 | Xitou and Yancun Water Supply Network Construction | Under Construction | 2022/6 | Tianjin Pipeline Engineering Group Co., Ltd. | | Approximately 60% of works completed |
| 16 | Works-TX-1 | Village Environment Improvement Project in Tunxi District-1 | Completed | 2020/9 | Hangzhou Xiaoshan Landscape Group Co., Ltd | Anhui Hengxin Construction Engineering Management Co. , Ltd | Construction Completed - also refer to paragraph 2 for details. |
| 17 | Works-TX-2 | Village Environment Improvement Project in Tunxi District-2 | Completed | 2021/1 | Kunpeng Construction Group Co., Ltd | | Construction Completed - also refer to paragraph 2 for details. |
| 18 | Works-TX-3 | Village Environment Improvement Project in Tunxi District-3 | Completed | 2020/12 | Kunpeng Construction Group Co., Ltd | | Construction Completed - also refer to paragraph 2 for details. |
| 19 | Works-XN-1 | Sewage and Stormwater Sewer Upgrade Project in Xiuning County - 1 | Under Construction | 2020/12 | Anhui Xinda Construction & Installation Co. Ltd | Anhui Hongji Construction Project Management Co. , Ltd | Approximately 95% of works completed |
| 20 | Works-XN-2 | Sewage and Stormwater Sewer Upgrade Project in Xiuning County - 2 | Under Construction | 2021/6 | Tiangong Fangyuan Construction Group Co. Ltd | Hebei Sanyuan Construction Supervision Co. Ltd | Approximately 95% of works completed |
| 21 | Works- | Village Environment | Under Construction | 2022/4 | Centennial Construction | | Approximately 75% of |

| No. | Contract Name | Contract Content | Contract Status | Date of Constr. Started | Contractor | Supervisor | Implementation Description |
|-----|---------------|---|--------------------|-------------------------|---|---|---|
| | XN-3 | Improvement Project in Xiuning County-Shangshan 1 | | | Group Co., Ltd. | | works completed |
| 22 | Works-XN-4 | Village Environment Improvement Project in Xiuning County-Shangshan 2 | Under Construction | 2022/4 | Centennial Construction Group Co., Ltd. | | Approximately 60% of works completed |
| 23 | Works-XN-5 | Village Environment Improvement Project in Xiuning County-Shangshan 3 | Under Construction | 2022/3 | Tianjin Pipeline Engineering Group Co., Ltd. | | Approximately 50% of works completed |
| 24 | Works-XN-6 | Village Environment Improvement Project in Xiuning County-Xikou | Under Construction | 2021/12 | Zhejiang Jiuhe Environment Co.,Ltd & Anhui Changcheng Construction Engineering Co., Ltd | | Approximately 70% of works completed |
| 25 | Works-XN-7 | Village Environment Improvement Project in Xiuning County- Wucheng | Under Construction | 2021/12 | Tonglin Shizheng Construction Co., Ltd | | Approximately 75% of works completed |
| 26 | Works-YX-1 | Sewage and Stormwater Sewer Upgrade Project in Yi County, and Zhang River Rehabilitation Project in Yi County | Completed | 2020/12 | Anhui Xinjian Holding Group | Jiangsu Yutian Engineering Consulting Group | Construction Completed - also refer to paragraph 2 for details. |

20. In addition, HPMO will use loan saving for proposed new activities (14 sub-projects/contracts, of which 12 are civil works) to further scale up the project outcomes and outputs in accordance with the midterm scope changes discussed with ADB & KfW. At the time of writing this EMR, the Feasibility Study Report (FSR) on the new activities has been basically completed and will be submitted to the domestic responsible authorities for approval. The domestic Environmental Impact Assessment (EIA) report for the new activities has also been completed. The ADB has reviewed the English version and provided comments. As next steps, the LIEC will prepare an addendum IEE and updated EMP for the midterm scope changes based on the revised EIA, which is expected to be submitted before 31 March 2023. Social Impact Assessment report for the new activities have been completed and approved by domestic authorities. The procurement for new sub-projects proposed during midterm review is expected to start second half of 2023.

21. Green Investment Fund (GIF) implementation progress is as follows:

- The agricultural socialization service of the first investment sub-project is being conducted. Yixian Younong Ecological Agriculture Co., Ltd., hereinafter referred to as Younong Company provided 7 agricultural cooperatives and 7 family farms with full process socialized agricultural services, such as seedling raising, mechanical ploughing, mechanical transplanting and transplanting, basal fertilizer application, pest control and weed control, and harvesting (Brassica napus, corn), covering a total farmland area of 8,757 mu.
- In the second half of 2022, the due diligence for the second investee, Huangshan Tianzhidu Environmental Technology Development Co., LTD. , hereinafter referred to as Huangshan Tianzhidu, has been completed, and the No Objection from ADB has been received on September 13. As of December 31, 2022, the agreement of equity investment program is being prepared and is expected to be published and signed in the first quarter of 2023
- In the second half of 2022, In addition to the above Huangshan Tianzhidu sub-project, three other subprojects were screened, including (i) Huangshan Guoda Ecological Agriculture Technology Co., LTD, (ii) She County Tourism Development Co., LTD, (iii) Huangshan Secret Scenery Tourism Development Co., LTD. The first subproject (Huangshan Guoda Ecological Agriculture Technology Co., LTD) failed to pass the screening because of environmental problems. The application of second subproject (She County Tourism Development Co., LTD) was cancelled because construction had already been completed. The initial screening for the third sub-project, Huangshan Secret Scenery Tourism Development Co., LTD, has been completed and the further environmental due diligence is being conducted.

II. SUMMARY OF THE PROJECT ENVIRONMENTAL MANAGEMENT PLAN (EMP)

22. The project environmental management plan (EMP) is the primary reference document for the government and ADB for all environment-related mitigation, monitoring, reporting, and training activities for the project. Timely and effective implementation of the EMP is a key condition of the loan agreement between the government and ADB. The EMP is to be implemented in all phases of the project: design, pre-construction, construction, and operation. The EMP was updated in November 2020 to ensure project compliance with PRC environmental laws and ADB's Safeguard Policy Statement (SPS 2009).

23. The EMP describes: the roles and responsibilities of all project agencies to implement this EMP; anticipated impacts and mitigation measures; inspection, monitoring, and reporting arrangements; training and capacity building; grievance redress mechanism (GRM); and public consultation and awareness raising.

24. Project institutional arrangements (Section B of the EMP). This section of the EMP describes the roles and responsibilities of relevant agencies for EMP implementation. For this project, the principal person responsible for EMP coordination is the PMO Environment Officer (Yin Quan, HPMO), acting on behalf of the HPMO. The implementing agencies, contractors, and construction supervision companies are responsible for on-site implementation of the EMP. Guidance and supervision to the PMO Environment Officer is given by the Loan Implementation Environment Consultant (Mr. Zhang Defa, ESD).

25. Potential impacts and mitigation (Section C of the EMP). This section of the EMP summarizes the potential impacts of the subprojects in the three districts and four counties during project preparation, design, construction and operation, and proposed mitigation measures. The effectiveness of these measures will be evaluated based on environmental inspections and monitoring to determine whether they should be continued, improved or adjusted.

26. Training (Section E of the EMP). This section of the EMP describes the training program for environmental safeguards, including the recipients and frequency of training.

27. Grievance Redress Mechanism (Section F of the EMP). This section of the EMP identifies the mechanisms to receive and manage any public environmental and/or social issues which may arise due to the project.

28. Environmental monitoring program (Section D of the EMP). Three types of project monitoring will be conducted under the EMP: (i) internal monitoring– to be conducted by the seven IAs and the CSCs; (ii) external monitoring – of air, water and noise standards – to be conducted by the certificated EMA in each project county/district; and (iii) compliance monitoring – to be conducted by both the EMA and LIEC, to ensure the EMP is being implemented.

29. Public Consultation (Section G of the EMP). During construction and operation, the project will continue to seek public consultation and raise awareness of project activities, especially those that may impact the public. The public consultation plan includes public participation in evaluating environmental benefits and impacts.

30. Reporting. The reporting requirements for the project, including the responsible agencies and reporting frequency was described in EMP.

III. IMPLEMENTATION STATUS OF ENVIRONMENTAL MANAGEMENT DURING THE REPORTING PERIOD

31. The chapter provides an overview of the implementation progress of the EMP during the reporting period.

A. Institutional setup

32. During the reporting period, The PMO and Huangshan Trust Investment Group/Huangshan Trust Investment Corporation (hereinafter referred to as HTIC/HXIC) respectively designated qualified environmental personnel to be responsible for coordinating the implementation of environmental management requirements, and there has been no changes or new appointments in environmental personnel compared to the previous reporting period. The HTIC has appointed project environmental management officers as required by ESMS, and there are 3 qualified environmental officers (of which 2 majored in environmental science) in charge for environmental management of the GIF. The contractor, the construction supervision company and the consultant designated qualified environmental personnel to coordinate the implementation of the environmental management requirements in accordance with the requirements of ADB. A loan implementation environmental consultant (LIEC) from the consulting company has been mobilized since October 2020 to support activities related to environmental management. The work management, coordination and communication in EHS of project are generally satisfactory.

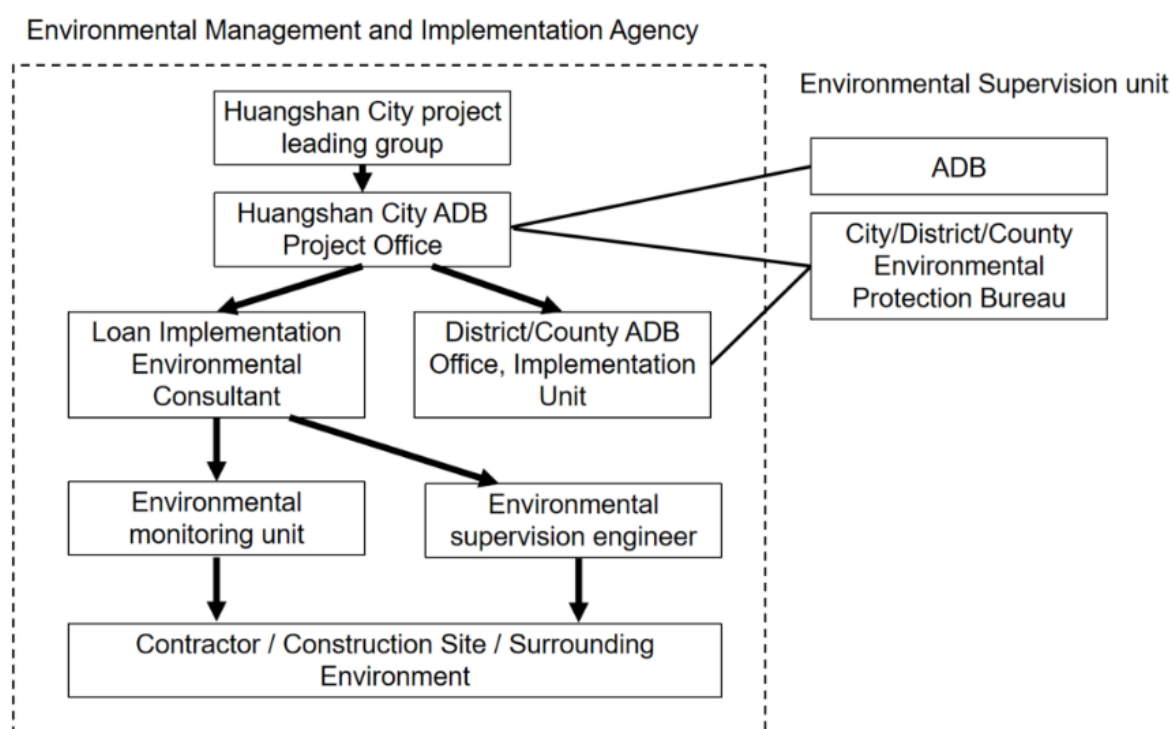


Figure 1 Environmental Management Organization Chart

33. Table 2-1, Table 2-2 and Table 2-3 summarizes the project specified environmental management personnel contacts.

Table 2-1: Information of dedicated environmental management correspondents

| Cities and counties | Institutions | Name of institution | Environmenta l Officer | Email |
|---------------------|--|------------------------------------|---------------------------|------------------|
| Huangshan City | Huangshan PMO | Huangshan Municipalities | Yin Quan | hsshxmb@126.com |
| Huangshan Mountain | Huangshan District PMO (Implementation Agency) | Huangshan District Government | Qin Ling | 122066540@qq.com |
| Huizhou District | Huizhou District PMO(Implementation Agency) | Huizhou District Government | Zheng Wenjing | 405550201@qq.com |
| Tunxi District | Tunxi District PMO (Implementation Agency) | Tunxi District Government | Cheng Shichang | 852428591@qq.com |
| Xiuning County | Xiuning County PMO (Implementation Agency) | Xiuning County Government | Xu Jinwei | 512368047@qq.com |
| She County | She County PMO (Implementation Agency) | She County Government | Fang Xiaohui | hssxshb@126.com |
| Yi County | Yi County PMO (Implementation Agency) | Yi County Government | Wang Xin | 392297684@qq.com |
| Qimen County | Qimen County PMO (Implementation Agency) | Qimen County Government | Fang Sheng | 291536803@qq.com |
| Huangshan City | Implementing Agency | Municipal Forestry Bureau | Xu Rui | hsssfz@163.com |
| Huangshan City | Implementing Agency | Huangshan Trust Investment Company | Fan Xianguang | 86691776@qq.com |
| Huangshan City | Implementing Agency | Huangshan Trust Investment Company | Liu Xinyue | 86691776@qq.com |
| Huangshan City | Implementing Agency | Huangshan Trust Investment Company | Chen Junqi | 86691776@qq.com |

**Table 2-2: Information of dedicated environmental management correspondents
(Subprojects in construction)**

| Contract number | Main Content | Company Name | | Environmental Officer |
|-----------------|--|---------------------|---|-----------------------|
| Works- HS-1 | Xinhua Village Green Agriculture Demonstration Project in Huangshan District | Contractor | Fujian Yucheng Construction Engineering Co., Ltd. | Zhao Sheng |
| | | Supervision company | Chuangda Consult Ltd | Xu Zhonghua |
| Works- HS-2 | Caocun River Rehabilitation Project in Huangshan District | Contractor | Jiangsu Shuigong Construction Co., Ltd | Zhang Han |
| | | Supervision company | Anhui Chizhou Jiuhua Engineering Consulting Co., Ltd. | Su Zhihui |
| Works- HS-3 | Xinhua Village Environment Improvement Project in Huangshan District | Contractor | Zhongdi Yingang Construction Group Co., Ltd. | Xuan Wei |
| | | Supervision company | Anhui Chizhou Jiuhua Engineering Consulting Co., Ltd. Zhongxin Chuangda Consulting Co., Ltd. | Zhang Biao |
| Works- HS-4 | Sewage and Stormwater Sewer Upgrade Project in Huangshan District | Contractor | Zhejiang Jiuhe Environmental Limited Company | Fang Zhengfei |
| | | Supervision company | Hubei Three Gorges Construction Project Management Co. , Ltd | Cheng Hongyu |
| Works- SX-1 | Sewage and Stormwater Sewer Upgrade Project in She County-1 | Contractor | China Petroleum Pipeline Engineering Co., Ltd | Fang Yongming |
| | | Supervision company | Zhejiang Yihua Construction Supervision Co. Ltd | Xu Zhonghua |
| Works- SX-5 | Xitou Village Environment Improvement Project in She County-2 | Contractor | Xingrun Construction Co., Ltd | Wang Shenghao |
| | | Supervision company | Jianjing Investment Consulting Co., Ltd. | Zhan Shuhua |
| Works- SX-6 | Xitou Village Environment Improvement Project in She County-1 | Contractor | Tianjin Pipeline Engineering Group Co., Ltd | Wang Xiaojun |
| | | Supervision company | Jianjing Investment Consulting Co., Ltd. | Zhan Shuhua |
| Works- | Xi'an River | Contractor | Gorden Road Group & | ZhangLei |

| Contract number | Main Content | Company Name | | Environmental Officer |
|-----------------|---|---------------------|---|-----------------------|
| SX-8 | Green Agriculture Demonstration Project in She County | | Zhejiang Jiuhe Environment Co.,Ltd | |
| | | Supervision company | Construction Supervision Co. Ltd | Xu Zhonghua |
| Works-XN-1 | Sewage and Stormwater Sewer Upgrade Project in Xiuning County - 1 | Contractor | Anhui Xinda Construction and Installation Co. , Ltd | Cui Tao |
| | | Supervision company | Anhui Hongji Construction Project Management Co. , Ltd | Yu Changzhong |
| Works-XN-2 | Sewage and Stormwater Sewer Upgrade Project in Xiuning County - 2 | Contractor | Tiangong Fangyuan Construction Group Co. Ltd | Linjunfeng |
| | | Supervision company | Hebei Sanyuan Construction Supervision Co. Ltd | ZhangJianjun |
| Works-XN-3 | Village Environment Improvement Project in Xiuning County-Shangshan 1 | Contractor | Centennial Construction Group Co., Ltd. company | ChengJianxin |
| | | Supervision company | Hebei Sanyuan Construction Supervision Co. Ltd | Wu Chunjiu |
| Works-XN-4 | Village Environment Improvement Project in Xiuning County-Shangshan 2 | Contractor | Centennial Construction Group Co., Ltd. company | Xie Weichen |
| | | Supervision company | Hebei Sanyuan Construction Supervision Co. Ltd | Rui Wenhe |
| Works-XN-5 | Village Environment Improvement Project in Xiuning County-Shangshan 3 | Contractor | Tianjin Pipeline Engineering Group Co., Ltd | Yangbin |
| | | Supervision company | Hebei Sanyuan Construction Supervision Co. Ltd | Bi Weidong |
| Works-XN-6 | Village Environment Improvement Project in Xiuning County-Xikou | Contractor | Zhejiang Jiuhe Environment Co.,Ltd & Anhui Changcheng Construction Engineering Co., Ltd | Lv Wenbin |
| | | Supervision company | Hebei Sanyuan Construction Supervision Co. Ltd | Hu Fabin |

| Contract number | Main Content | Company Name | | Environmental Officer |
|-----------------|---|---------------------|---|-----------------------|
| Works-XN-7 | Village Environment Improvement Project in Xiuning County-Wucheng | Contractor | Tonglin Shizheng Construction Co., Ltd | Ye Bin |
| | | Supervision company | Hebei Sanyuan Construction Supervision Co. Ltd | Shao Heping |
| Works-YX-1 | Sewage and Stormwater Sewer Upgrade Project in Yi County | Contractor | Anhui Xinjian Holdings Limited | Wang Qing |
| | | Supervision company | Jiangsu Yutian Engineering Consulting Group Co. , Ltd | Zhou Chunlong |
| Works-QM-1 | Sewage and Stormwater Sewer Upgrade Project in Qimen County-1 | Contractor | Anhui Xinjian Holdings Limited | Mr. Zhen |
| | | Supervision company | Anhui Hengxin Construction Engineering Management Co. , Ltd | Ye Pingbo |
| Works-QM-2 | Sewage and Stormwater Sewer Upgrade Project in Qimen County-2 | Contractor | Shanhu Construction Group Co., Ltd | Zhou Biqiang |
| | | Supervision company | Anhui Hengxin Construction Engineering Management Co. , Ltd | Chen Hui |

Note: Seven out of eight completed civil works contracts have completed final quality verification and transfer of ownership. The remaining Works-SX-6 contracts have not yet completed final quality verification and transfer of ownership, and are still managed by the relevant units.

Table 2-3: Information of dedicated environmental management correspondents (Subprojects completed)

| Contract number | Main Content | Environment Person/Organization |
|-----------------|---|---|
| Works-HZ-1 | Sewage and Stormwater Sewer Upgrade Project in Huizhou District-1 | Housing Construction Bureau of Huangshan District |
| Works-HZ-2 | Village Environment Improvement Project in Huizhou District | Yangcun Township Government, Huizhou District |
| Works-TX-1 | Village Environment Improvement Project in Tunxi District-1 | Bureau of Agriculture and Rural Affairs, Tunxi District |
| Works-TX-2 | Village Environment Improvement Project in Tunxi District-2 | |
| Works-TX-3 | Village Environment Improvement Project in Tunxi District-3 | |
| Works-YX-1 | Sewage and Stormwater Sewer Upgrade Project in Yi County | Biyang Township Government, Yi County |

| Contract number | Main Content | Environment Person/Organization |
|-----------------|---|---|
| Works-HS-4 | Sewage and Stormwater Sewer Upgrade Project in Huangshan District | Housing Construction Bureau of Huangshan District |

34. Conclusion. The project organization setup plan in the environmental management plan is being implemented as required, and the implementation meets the requirements of the environmental management plan.

B. Implementation of the project mitigation measures

35. Table 3 summarized the implementation status of the mitigation measures in the EMP.

Table 3-1: Project impacts, mitigation measures, and implementation status

| Item | Potential impacts / issues | Mitigation measures | Implementation status | Whether in compliance (Yes/No) |
|-----------------------|--|--|--|--------------------------------|
| Detailed design stage | Institutional strengthening for EMP Implementation and supervision | At least 1 month before construction: (i) reconfirm the full-time status of the HPMO Environmental Officer for the project; (ii) appoint at least one environment officer in each of the 7 IAs (excluding HTIC, which will separately engage an environment officer for the ESMS). | Huangshan city/district/county PMO and implementing agency have appointed at least one person in charge of environment, see Table 2-1 for details. Employees Fan Xianguang, Liu Xinyue, and Chen Junqi were appointed as environmental officers, and Cheng Shifeng, Chen Yan, and Jiang Junyu were appointed as social officers by HTIC on November 2020. Among environmental officer, Fan has a master's degree in agronomy from Northwest Agriculture and Forestry University. In addition, Liu and Chen majored in environment of South China Agricultural University, and they have received learning and training in environmental ecology | Yes |
| | | At least 2 months before any construction, engage LIEC. | ESD as a LIEC with a dedicated an environmental consultant, was hired in October | Yes |

| Item | Potential impacts / issues | Mitigation measures | Implementation status | Whether in compliance (Yes/No) |
|------|----------------------------|--|---|--------------------------------|
| | | | 2020 . | |
| | | At least 2 months before any construction, provide training to all environmental staff for EMP implementation. | In the second half of 2022, the LIEC (ESD) visited all the construction sites and introduced the ADB's environmental requirements to the IA, supervisors and construction contractors | Yes |
| | | Confirm that at least one certified EMA has been recruited for the project at least 2 months before any construction. | Huangshan Angel Environmental Testing Co., Ltd. will continue to carry out the external environmental monitoring of the project during the implementation of the project. The company has environmental monitoring qualifications; the scope of services includes all monitoring required by the project. | Yes |
| | | When the contractors and CSCs have been engaged, conduct training on the project EMP. | In the second half of 2022, the project management consultant (ESD) visited all the construction sites in districts and counties and introduced the ADB's environmental requirements to the IA, supervisors and construction contractors | Yes |
| | Updating the EMP | Update the mitigation measures defined in this EMP based on final detailed design. This will include the specific designs for the use of biopesticides which have been prepared during the detailed designs (see IEE Section V.D.6 and Section X). | No updates to the Nov 2020 EMP. To be updated once mid-term adjustments are approved and IEE addendum completed | Yes |
| | | Asbestos. Under ADB's List of Prohibited Investment Activities (SPS, 2009), the use of asbestos is prohibited except for the "purchase and use of bonded | The EMP has been distributed to the design institutes by the PMO and specifies that no asbestos of any kind shall be used | Yes |

| Item | Potential impacts / issues | Mitigation measures | Implementation status | Whether in compliance (Yes/No) |
|--------------|----------------------------|--|--|--------------------------------|
| | | asbestos cement sheeting where the asbestos content is <20%" (SPS 2009: 76). However: (i) in practice it is difficult to assess whether asbestos content is <20%; and (ii) international development banks are increasingly banning the use of all asbestos from their projects. To ensure international best practice for human health and safety for this project: no asbestos of any kind will be used in any materials supported by the project. | in the design of the project. | |
| | | Check with the design institute and HPMO to ensure the proposed materials do not include the use of asbestos. | The construction design has been reviewed by PMOs and environmental consultants and the proposed materials do not include the use of asbestos. This will apply for any modification / additions per mid-term adjustments, as applicable. | Yes |
| | | Submit the updated EMP to ADB for review; | Project scope changes were proposed and an IEE addendum and updated EMP is being prepared, which is expected to be completed by the end of March 2023 | Yes |
| | | In case of major changes of project location and/or additional physical components, form a DEIA team to conduct additional DEIA and public consultation. The revised DEIA should be submitted to Huangshan and district/county EEBs and ADB for approval and disclosure. To determine if the change is minor or major the HPMO will consult with ADB. | The Project location and content will be partially changed and updated EMP is being prepared. | Yes |
| Construction | Environmental | Prior to construction, the HPMO will hire an EMA for | Huangshan Angel Environmental Monitoring | Yes |

| Item | Potential impacts / issues | Mitigation measures | Implementation status | Whether in compliance (Yes/No) |
|-------------|--------------------------------|---|--|--------------------------------|
| Preparation | monitoring plan | environmental monitoring; | Co., Ltd is responsible for the external environmental monitoring of the project. On the other hand, the third-party monitoring agency entrusted by the environmental protection department conducts daily environmental monitoring according to domestic environmental requirements | |
| | | Prepare detailed monitoring plan in accordance with the monitoring plan in this EMP. | A detailed environmental monitoring plan has been prepared based on the latest procurement plan and EMP. | Yes |
| | Bidding and contract documents | Mitigation measures in the EMP are incorporated in all bidding documents; | The EMP was included in all bidding document submitted to ADB. | Yes |
| | | Bidding documents are sent to ADB for review; | The bidding documents has sent to ADB for review | Yes |
| | | Prepare environmental contract clauses for contractors. | Environmental contract clauses have been prepared for contractors. | Yes |
| | EMP training | LIEC, or invited environment specialists and/or officials from EEBs provide training on construction environmental management, implementation, supervision, to contractors and CSCs, in accordance with the training plan in this EMP | In the second half of 2022, a total of 6 on-site supervision has been conducted by consulting company. Three to four districts/counties construction sites were visited at a time, covering all 18 ongoing project sites in total. For civil works commencing this reporting period, The ADB's environmental requirements have been introduced to the IAs, CSC and contractors, carried out by the LIEC. | Yes |
| | | | | |

| Item | Potential impacts / issues | Mitigation measures | Implementation status | Whether in compliance (Yes/No) |
|-----------------------|--|---|---|--------------------------------|
| | Establish GRM | Responsibility for GRM implementation is assigned to the HPMO and IA Environmental Officers and HPMO Social Officers, and is included in their terms of reference; | GRM has been established in the preliminary preparation stage of the project. The responsible personnel have been designated. | Yes |
| | | HPMO and IA personnel will be aware of, and trained in, the GRM, and will help support the environmental and social officers when necessary. | In the second half of 2022, ADB's environmental requirements, including GRM, are introduced by HPMO with the assistance of LIEC to the contractors and CSCs | Yes |
| | | Key contact details for the GRM (phone number, fax, address, email) will be provided on the HPMO, IAs and/or EEB public websites and information boards at construction sites. | HPMO has unified a dedicated environmental information board, which includes the GRM | Yes |
| | Site EMPs | Prior to any works, prepare site-specific EMP for individual construction sites | At present, all of the 26 civil works contracts have started. Site specific EMPs have been prepared for all construction sites | Yes |
| | | Review and ensure site EMP complies with the measures in this EMP | Environmental consultant reviewed and ensured that site EMP complies with the measures in this EMP | Yes |
| Wastewater management | Construction wastewater and domestic wastewater generated from construction activities | Sedimentation tanks will be installed on site and, after settling out of solids, the upper clear liquid will be recycled for spraying the construction site (dust control), and the waste residue in the tank will be cleared and transported to the construction spoil disposal sites. | Being implemented | Yes |
| | | Oil-water separators will be installed before the sedimentation tank for oily wastewater treatment. | Being implemented | Yes |
| | | All sites for washing of construction equipment will be equipped with water collection | Being implemented | Yes |

| Item | Potential impacts / issues | Mitigation measures | Implementation status | Whether in compliance (Yes/No) |
|------|----------------------------|--|--|--------------------------------|
| | | basins and sediment traps. | | |
| | | Domestic wastewater generated from construction camps will be disposed in three ways: (i) for project sites nearing septic tanks in surrounding villages, domestic wastewater will be treated by the septic tanks before being used for irrigation; (ii) for project sites accessible to municipal sewerage systems, domestic wastewater will be discharged into the nearest sewerage system; (iii) for project sites neither close to villages nor sewerage systems, temporary septic tanks will be constructed for the centralized treatment of domestic wastewater. | N/A. Existing houses are leased for all on-site offices and the domestic wastewater is discharged through the existing pipe. No temporary buildings involved. | Yes |
| | | Fuel storage, machinery maintenance workshop and vehicle cleaning areas must be stationed at least 500 m away from the waterbody. | N/A. The crawler and wheel loaders used are leased from equipment vendors, who are responsible for fuel and maintenance. There is no fuel storage or maintenance workshop on site. | Yes |
| | | Storage facilities for fuels, oil, and other hazardous materials will be within secured areas on impermeable surfaces and provided with bunds and cleanup installations. | N/A. There is no fuel storage or maintenance workshop on site. | Yes |
| | | Contractors will develop actions for control of oil and other dangerous substances as part of their site EMPs. | Being implemented | Yes |
| | | Contractors' fuel suppliers must be properly licensed. They shall follow proper protocol for transferring fuel and the PRC standard of JT3145-91 (Transportation, Loading and Unloading of Dangerous or | Being implemented | Yes |

| Item | Potential impacts / issues | Mitigation measures | Implementation status | Whether in compliance (Yes/No) |
|--------------|---|--|--|--------------------------------|
| | | Harmful Goods. revised). | | |
| | | Labor camps will be located at least 500 m from waterbody. | N/A. Existing houses are leased for all on-site offices and the domestic wastewater is discharged through the existing pipe. No temporary buildings involved. | Yes |
| | | Portable toilets and on-site wastewater pre-treatment systems will be installed at construction camps along with proper maintenance protocols. | N/A. | Yes |
| Water supply | Interruption to existing water supply due to works | Ensure that existing water and wastewater services continue to be provided to communities during the civil works. | Being implemented | Yes |
| | | Any interruptions to such services as a result of the project works are as limited as possible. | Being implemented | Yes |
| | | Prior to any such interruptions, consultations are held with all affected communities. | Before the start of construction activities, the construction plan has been discussed with relevant communities and villages, and the construction can only be started after receiving a positive reply | Yes |
| Ambient Air | Dust generated by construction activities, gaseous air pollution (CO, CH and NO ₂) from construction machinery, and fugitive emission of odor (NH ₃ and H ₂ S) from existing sewage pipes | Establish a series of measures for dust control in construction sites before work commencement. | Being implemented | Yes |
| | | Install barriers at the boundary of construction sites with a height no less than 2.5m. | The barriers at the boundary of urban construction sites installed. The alleys in rural villages are narrow, only 1-2m. it is difficult to install fences. At present, the safety requirements can be met by setting up warning signs and reminding passers-by by safety | Yes |

| Item | Potential impacts / issues | Mitigation measures | Implementation status | Whether in compliance (Yes/No) |
|------|----------------------------|--|--|--------------------------------|
| | | | worker | |
| | | Spraying water daily on construction sites where fugitive dust is being generated. Before excavation, proper spraying shall be performed on the working surface to maintain a certain humidity to reduce dust generation. | Sprinklers have been equipped for spraying water in the construction sites | Yes |
| | | Cover stockpiles with dust shrouds or tarpaulin to avoid spillage or dust generation. For the earthwork management for backfill, measures will include surface press and periodical spraying and covering. Extra earth will be cleared from the project site in time to avoid long term stockpiling. | The exposed soil was covered | Yes |
| | | Vehicles with a closed load-carrying case shall be used to transport potentially dust-producing materials. | Being implemented | Yes |
| | | Design haulage routes and schedules to avoid transport occurring in the central areas, traffic intensive areas or residential areas. | Being implemented. If the urban civil engineering project has external soil, it will be transported to the designated spoil ground according to the requirements of the municipal authority. The original excavated soil is used for the backfilling of the pipe trench in the rural project, and no soil transportation is involved. | Yes |
| | | Install vehicle washing equipment or conduct wheel washing manually at each exit of the work area to prevent trucks carrying mud and soils onto public roads. | Being implemented | Yes |
| | | Keep construction vehicles and machinery in good working | Responsibility by the vehicle rental vendors | Yes |

| Item | Potential impacts / issues | Mitigation measures | Implementation status | Whether in compliance (Yes/No) |
|-------|---|--|--|--------------------------------|
| | | order, regularly service and turn off engines when not in use. Ensure vehicle and machinery emissions comply with PRC standards of GB18352-2005, GB17691-2005, GB11340-2005, and GB18285-2005. | | |
| | | During high wind, dust-generating operations shall not be performed, and onsite construction materials shall be covered with shrouds. When wind speed exceeds PRC Levels 4 or 5, excavation, soil transportation and demolition works are not permitted. Special precautions need to be applied in the vicinity of sensitive receptors such as schools, kindergartens and hospitals. | Being implemented | Yes |
| | | Transport the sludge from existing sewer pipes offsite timely to reduce fugitive odor emission. | Being implemented | Yes |
| | | Use exhaust fans at welding sites to increase ventilation and promote the diffusion of organic exhaust gas onsite. | Being implemented | Yes |
| | | Timely monitoring of air quality and inspections during construction. | Being implemented | Yes |
| Noise | Noise generated from construction and transportation activities | Construction activities will be planned in consultation with local authorities and communities so that activities with the greatest potential to generate noise are planned during periods of the day that will result in the least disturbance. | Being implemented. | Yes |
| | | Construction works will be limited to daytime and will be strictly prohibited during the nighttime (22:00 h to 06:00 h) | Before construction, the construction plan has been publicized and reviewed by the local authorities and | Yes |

| Item | Potential impacts / issues | Mitigation measures | Implementation status | Whether in compliance (Yes/No) |
|------|----------------------------|--|---|--------------------------------|
| | | and noon (12:00 h to 14:00 h). Exceptions will only be allowed in exceptional cases, and only after getting the approval of the surrounding residents, local environmental authority and other relevant departments. The contractor shall apply for the approval seven days before the construction works. Nearby residents will be notified of such nighttime activities well in advance. | discussed with the community and villages,. and the construction can only be started after receiving a positive reply. There is no night time works involved. | |
| | | When preparing construction planning, simultaneous high-noise activities will be avoided. High noise activities will be scheduled during the day rather than evening hours. Similarly, the construction sites will be planned to avoid multiple high noise activities or equipment from operating at the same location. | Noisy activities such as earth excavation and concrete pavement drilling work are carried out only during the day | Yes |
| | | Movable noise barriers will be adopted during construction at daytime. The barriers will be of adequate size and thickness to reduce construction noise to the required standards; and (ii) be placed to maximize noise absorption. | Being implemented | Yes |
| | | Low-noise equipment will be selected as much as possible. Equipment and machinery will be equipped with mufflers and will be properly maintained to minimize noise. | Being implemented | Yes |
| | | Transportation routes and delivery schedules will be planned to avoid densely populated and sensitive areas and high traffic times. Vehicles transporting construction materials or waste will slow down and not use their horn when passing through or nearby | Being implemented | Yes |

| Item | Potential impacts / issues | Mitigation measures | Implementation status | Whether in compliance (Yes/No) |
|--------------|-------------------------------------|--|---|--------------------------------|
| | | sensitive locations, such as residential communities, schools and hospitals. No honking is permitted during nighttime. | | |
| | | Monitor noise at sensitive areas at regular intervals. If noise standards are exceeded, equipment and construction conditions shall be checked, and mitigation measures shall be implemented to rectify the situation. | Being implemented | Yes |
| | | Conduct regular interviews with residents/villagers adjacent to construction sites to identify noise disturbance. Community feedback will be used to adjust work hours of noisy machinery. | Frequent communication between IAs, the Contractors, the community, and the village to be maintained | Yes |
| | | For the households that will be within 60 m of construction works (Section V.D.3 of IEE), particular attention will be provided. This will include: (a) follow-up consultations with these households prior to the start of any works, to specify the exact planned dates and schedule of works, nature of works, equipment to be used, safety measures, and public access during construction; (b) installation of noise barriers to reduce as much of the emissions as possible, and/or installation of additional layers on the windows of the affected homes as necessary, based on the assessment of the most technically effective method and feedback from the community consultations; (c) agreement on the duration of daily works. | Before construction, the construction plan has been publicized and reviewed by the local authorities and discussed with the community and villages, and the construction can only be started after receiving a positive reply, There is no nighttime works involved. During the reporting period, the PMO conducted pre-construction visits with stakeholders for all started civil works projects, informed relevant construction information and announced it to the village committee | Yes |
| Soil erosion | Soil erosion caused by construction | Prepare site soil erosion management plans before works begin. | Being implemented | Yes |

| Item | Potential impacts / issues | Mitigation measures | Implementation status | Whether in compliance (Yes/No) |
|------|----------------------------|---|---|--------------------------------|
| | activities, earthworks | Level the ground for the temporary spoil storage sites with proper blocking measures. | Being implemented | Yes |
| | | During construction phase, the earthwork will be reasonably planned and balanced to reduce the stockpiling of spoil onsite as much as possible. Spoil will be reused onsite to the maximum extent feasible as fill. The spoil sites will be away from roads and be restored after storage activities. | During the construction process, the original excavated soil has been used for backfilling as much as possible, so as to reduce the external transportation of earthwork. | Yes |
| | | Limit construction during rainy season and high winds. Appropriate stormwater drainage systems and slope protection measures will be implemented to minimize soil erosion, such as perimeter bunds and temporary detention and settling ponds to control topsoil runoff. | Being implemented | Yes |
| | | The construction schedule will be well designed to minimize the exposure time of bare land surface and stabilize all earthwork disturbance areas timely after the earthworks are completed. | N/A. Detailed construction plans of all urban projects have been prepared and approved by the local authorities, and publicized around the site. Temporary soil dumps shall be covered. The excavation areas for pipeline installation in rural projects is small (0.6~1m wide), the construction speed of excavation and backfilling is fast, and the exposure time is short. | Yes |
| | | Minimize open excavation areas and slope during trenching. | The excavation areas and slope are specially designed, and if necessary, pile measures are adopted to reduce the excavation areas | Yes |
| | | Construction camps, storage areas and access roads will be | N/A. Existing house are leased for all on-site | Yes |

| Item | Potential impacts / issues | Mitigation measures | Implementation status | Whether in compliance (Yes/No) |
|-------------|--|--|--|--------------------------------|
| | | located within the acquired land to minimize the impacts on the soil and land vegetation in surrounding area. | offices and the domestic wastewater is discharged through the existing pipe. No temporary buildings involved. | |
| | | Landscaping will only use native plant species. | Being implemented | Yes |
| | | Construct intercepting channels and drains to prevent runoff entering construction sites and divert runoff from sites to existing drainage or open ground for watering the vegetation. | Being implemented | Yes |
| | | Rock material for the gabion cages for river revetment will be sourced from: (i) licensed suppliers of construction materials; and (ii) the old revetment material extracted from the Caocun River as part of the project works. | The construction of the river revetment of the Zhang River in Yixian County and Caocun River in Huangshan District has been implemented according to prescribed requirement. | Yes |
| Solid Waste | Solid waste generated by construction activities and from workers' camps | Provide appropriate waste collection and storage containers at locations away from surface water or sensitive spots; | Being implemented | Yes |
| | | Arrange with municipal waste collection services for regular collection of waste; | Being implemented | Yes |
| | | Properly remove and dispose residual materials, wastes and contaminated soils. Paving or vegetating shall be done as soon as the materials are removed to stabilize the soil; | Being implemented | Yes |
| | | Burning of waste is strictly prohibited; | Being implemented | Yes |
| | | Provide sufficient garbage bins at strategic locations and ensure that they are protected from birds and vermin, and emptied regularly by the municipal waste collection systems. | Being implemented | Yes |

| Item | Potential impacts / issues | Mitigation measures | Implementation status | Whether in compliance (Yes/No) |
|---------|---|---|-----------------------|--------------------------------|
| | | <p>CONTRACTOR PERFORMANCE TARGET:</p> <p>No uncollected waste at close of construction activities each day.</p> | Being implemented | Yes |
| Ecology | Protection of flora and fauna around construction sites | Minimize damage to vegetation. Minimize the damage to existing vegetation and recover the vegetation timely after the completion of construction works. Native plant species will be used for replanting and site rehabilitation. | Being implemented | Yes |
| | | The surface soil (0-30 cm) will be stored separately for reuse for landscape greening or agriculture. The stockpiling shall have a height less than 5m and a slope less than 1:1.5 with proper compaction to avoid soil erosion. | Being implemented | Yes |
| | | Minimize damage to aquatic habitats. For the stone debris removal from river channel in Caocun River, only debris from previous river revetment works will be removed, and all works shall be conducted manually without intervention of any mechanical equipment to prevent mechanical damage to the riverbed. | Being implemented | Yes |
| | | All river channel related works will be carried out during dry season (October to March) to minimize potential impacts on the aquatic habitat. | Being implemented | Yes |
| | | Landscaping and site rehabilitation. All planting activities under the project, including re-vegetation, landscaping, and rehabilitation of construction sites, will only use plant species which are (i) native (i.e. naturally occurring) to the Xin'an River basin, and (ii) are | Being implemented | Yes |

| Item | Potential impacts / issues | Mitigation measures | Implementation status | Whether in compliance (Yes/No) |
|------|----------------------------|--|---|--------------------------------|
| | | sourced from local stock within Huangshan Municipality. | | |
| | | In the event that non-native seedlings are required for rapid stabilization of exposed soils and sites, HMG will and will cause the IAs to ensure that only sterile seedlings are used to prevent the spread of weeds. | Being implemented | Yes |
| | | Training. Provide trainings to contractors and workers to increase their awareness on the need to protect the environment, wildlife and vegetation around the construction sites. | In the second half of 2022, the consulting company (ESD) visited all the construction sites in districts and counties and introduced the ADB's environmental requirements to the IA, supervisors and construction contractors. The details are provided in Table 7. | Yes |
| | | Site inspection. The CSCs and the environmental officer of the HPMO will regularly inspect construction sites to ensure that habitats are well demarcated, and workers are fully informed of "no-go" areas. | Regular on-site EHS and quality supervision are carried out by consulting company organized by HPMO | Yes |
| | | Biopesticides. Before any use of biopesticides, confirm that: (a) a complete inventory of the pest species to be addressed for each demonstration site has been prepared; (b) any "pest" species which are rare, threatened, restricted range, or protected species have been excluded from the pest management program; (c) the specific organisms or other agents to be used as biopesticides have been identified during the detailed engineering designs; (d) each proposed agent or method has been confirmed to be highly crop-specific and will only act on | N/A. No use of biopesticides is involved in started project | Yes |

| Item | Potential impacts / issues | Mitigation measures | Implementation status | Whether in compliance (Yes/No) |
|----------------|--|--|---|--------------------------------|
| | | the intended pest species, and will not affect local flora and fauna (e.g. the use of water mixed with tobacco will not be used as it may impact aquatic organisms in nearby streams); (e) specific application procedures, volumes, and post-application monitoring have been detailed, to ensure safe and responsible use of the biopesticides. | | |
| Protected Area | Damage to protected area during construction | Engineering design will be in line with the Taiping Lake Scenic Zone Master Plan (2015- 2030) and Huashan Mysterious Grottoes Scenic Zone Master Plan (2007-2025); | N/A | Yes |
| | | All works will be conducted within the confirmed ecological red line only; | No changes or variation to the current project scope within this reporting period | Yes |
| | | Avoid setting up temporary storage sites for construction waste within scenic zones, and all waste generated will be transported out for disposal timely; | N/A | Yes |
| | | For subprojects near riverway, proper onsite wastewater treatment facilities (e.g. sedimentation tank) will be set up to avoid direct discharge of wastewater and impairing of aquatic ecosystem along the river; | N/A | Yes |
| | | Design the location and shape of spoil piles before construction; | N/A | Yes |
| | | Vehicles will slow down within scenic zones and frequent water spraying in construction sites will be performed to minimize dust; | N/A | Yes |
| | | Recover the vegetation in construction sites timely after the completion of construction works | N/A | Yes |

| Item | Potential impacts / issues | Mitigation measures | Implementation status | Whether in compliance (Yes/No) |
|--|--|--|--|--------------------------------|
| | | to minimize soil erosion and visual landscape impact in scenic zones. | | |
| Physical cultural resources | Damage to known or unknown above or below-ground cultural relics | Establish chance-find procedures for physical cultural resources; | N/A | Yes |
| | | If a new site is unearthed, work shall be stopped immediately and the IA, HPMO and local CRB promptly notified. The construction will resume only after a thorough investigation and with the permission of appropriate authority. | N/A | Yes |
| Community and occupational health and safety | Site and access safety | Erect signs will be placed at construction sites in view of the public, warning people of potential dangers such as moving vehicles and excavations, and raising awareness on safety issues; | Establishment of on-site safety and traffic guidance boards implemented. | Yes |
| | | Assign personnel to direct pedestrians around dangerous work areas; | The full-time safety management personnel on site and traffic guiders for closed urban road have been arranged | Yes |
| | | Ensure that all sites are secure, discouraging access through appropriate fencing; | Temporary barriers and reflective cones are installed on site | Yes |
| | | Place clear signs at construction sites in view of the people at risk (including workers and nearby communities), warning people of potential dangers such as moving vehicles, hazardous materials, excavations, and raising awareness on safety issues; | Establishment of on-site safety and traffic guidance boards implemented. | Yes |
| | | At the end of each day, all sites and equipment will be made secure (through fencing and/or lock-down of equipment) to prevent public access; | Being implemented | Yes |

| Item | Potential impacts / issues | Mitigation measures | Implementation status | Whether in compliance (Yes/No) |
|------|----------------------------|---|---|--------------------------------|
| | | Erect safety barricades around all excavations; | Temporary barriers and reflective cones are installed on site | Yes |
| | | Hold a public consultation meeting prior to commencing construction to discuss issues associated with ensuring the safety of nearby communities in vicinity of the construction site. | Being implemented. During the reporting period, the PMO conducted pre-construction visits with stakeholders for new started civil engineering projects, informed relevant construction information, and published in the village committee. | Yes |
| | Occupational health | Provide personal protection equipment to workers as needed, e.g. safety boots, helmets, gloves, protective clothing, goggles, ear protection in accordance with health and safety regulations. | Being implemented | Yes |
| | | An emergency response plan to take actions on accidents and emergencies, including environmental and public health emergencies associated with hazardous material spills and similar events will be prepared, and submitted to the IA for review and appraisal. A fully equipped first-aid base in each construction site will be provided. | Being implemented | Yes |
| | | A Records Management System will be established to document occupational accidents, diseases, and incidents, that: (a) includes a tracking system to ensure that incidents are followed-up; (b) can easily retrieve records; and (c) can be used during compliance monitoring and audits. The system will be backed up on at least one external hard drive to protect records against loss or damage. | Being implemented | Yes |
| | | | | |

| Item | Potential impacts / issues | Mitigation measures | Implementation status | Whether in compliance (Yes/No) |
|------|---|--|-----------------------|--------------------------------|
| | | Ensure that safety, rescue and industrial health matters are given a high degree of publicity to all persons regularly or occasionally on the Site. Posters drawing attention to site safety, rescue and industrial health regulations will be made or obtained from the appropriate sources and will be displayed prominently in relevant areas of the site. | Being implemented | Yes |
| | | Train all workers in basic sanitation and health care issues, general health and safety matters, and on the specific hazards of their work and sites and the requirements for community safety. | Being implemented | Yes |
| | | Asbestos. In the event that materials containing asbestos are suspected: (i) the contractor will immediately inform the IA, who will inform the HPMO; (ii) the contractor will subcontract the municipal center for hazardous waste, who will be responsible for the safe handling, transport, and disposal of the materials; (iii) such materials will only be disposed in a landfill site certified and designed to receive hazardous materials. | No asbestos use found | Yes |
| | Community health and safety - COVID-19 prevention and control | <p>(a) Organization and mobilization</p> <p>Establish street (township) and community (village) level prevention and control work teams, with cadres, community health service centers and family doctors as the main force, supplemented by residents and volunteers, and full-time and part-time staff, so as to implement grid-based management and carpet-style management, with responsibility</p> | Being implemented | Yes |

| Item | Potential impacts / issues | Mitigation measures | Implementation status | Whether in compliance (Yes/No) |
|------|----------------------------|---|-----------------------|--------------------------------|
| | | attributable to corresponding person, so as to fully cover communities (villages), buildings (natural villages) and families, and to implement prevention and control measures. | | |
| | | <p>(b) Health education</p> <p>Make full use of a variety of methods to carry out targeted publicity on the prevention and control of pneumonia caused by novel coronavirus infection. Raise the awareness of the masses on the health knowledge, the key points of protection, the importance of healthy habits and protection in time.</p> | Being implemented | Yes |
| | | <p>(c) Information notification</p> <p>Release the information of medical treatment to the public, and remind all kinds of patients to go to designated institutions for medical treatment by classification and levels. Release local pandemic information, information on traffic and travel risks on a daily basis .</p> | Being implemented | Yes |
| | | <p>(d) Management of returnees from affected areas</p> <p>Issue a notice, requiring people returning from affected area to register for physical examination immediately, and take the initiative to self-isolate for 14 days. People with respiratory symptoms such as fever should seek medical treatment nearby in time, and be isolated at home or go to designated institutions for isolation as required.</p> | Being implemented | Yes |
| | | <p>(e) Environmental sanitation management</p> <p>Clean up key places and dispose</p> | Being implemented | Yes |

| Item | Potential impacts / issues | Mitigation measures | Implementation status | Whether in compliance (Yes/No) |
|------|----------------------------|---|-----------------------|--------------------------------|
| | | of garbage and dirt. Organize and carry out comprehensive vector control and disinfection in time to effectively reduce vector density. | | |
| | | (f) Material preparation; Provide necessary prevention and control items and materials, such as thermometers, masks, disinfection supplies, etc. | Being implemented | Yes |
| | | (g) Close contact management The close contacts of the confirmed cases of pneumonia infected by the new coronavirus should be screened and home or centralized medical observation should be carried out. Follow up the health status of close contacts daily, instruct the observation subjects to monitor changes in their own conditions sensitively, and keep records at any time. Make preparations for the isolation and control of patients and transfer to designated hospitals. | Being implemented | Yes |
| | | (h) Disinfection Properly carry out disinfection of pandemic spots such as the home, building units, offices and conference rooms of the employer of the confirmed case, and clean and disinfect public places. | Being implemented | Yes |
| | | (i) Blockade of affected area For communities defined as affected areas, when necessary, measures can be taken to block the affected areas, where efforts should be made to restrict the access by personnel, and temporarily requisition houses | Being implemented | Yes |

| Item | Potential impacts / issues | Mitigation measures | Implementation status | Whether in compliance (Yes/No) |
|------|--|--|-----------------------|--------------------------------|
| | | and transportation tools. | | |
| | | <p>(j) Restrict the gathering of people</p> <p>In the community, fairs and gatherings shall be restricted or suspended, and public places such as public baths, hot springs, cinemas, Internet cafes, KTVs and shopping malls should be closed. Suspend work, business or classes when necessary.</p> | Being implemented | Yes |
| | Occupation health and safety - COVID-19 prevention and control | (a) The Contractor should prepare a detailed profile of the project work force, key work activities, schedule for carrying out such activities, different durations of contract and rotations (e.g. 4 weeks on, 4 weeks off). | Being implemented | Yes |
| | | This should include a breakdown of workers who reside at home (i.e. workers from the community), workers who lodge within the local community and workers in on-site accommodation. Where possible, it should also identify workers that may be more at risk from COVID-19, those with underlying health issues or who may be otherwise at risk. | Being implemented | Yes |
| | | Consideration should be given to ways in which to minimize movement in and out of site. This could include lengthening the term of existing contracts, to avoid workers returning home to affected areas, or returning to site from affected areas. | Being implemented | Yes |
| | | Workers accommodated on site should be required to minimize contact with people near the site, and in certain cases be prohibited from leaving the site | Being implemented | Yes |

| Item | Potential impacts / issues | Mitigation measures | Implementation status | Whether in compliance (Yes/No) |
|------|----------------------------|--|--|--------------------------------|
| | | for the duration of their contract, so that contact with local communities is avoided. | | |
| | | Consideration should be given to requiring workers lodging in the local community to move to site accommodation (subject to availability) where they would be subject to the same restrictions. | Being implemented | Yes |
| | | Workers from local communities, who return home daily, weekly or monthly, will be more difficult to manage. They should be subject to health checks at entry to the site (as set out above) and at some point, circumstances may make it necessary to require them to either use accommodation on site or not to come to work. | The Personnel Health Monitoring Record Sheet has been filled regularly by staff on duty. Construction Workers shall return to their posts with a negative PCR test result. | Yes |
| | | (b) Establishing a system for controlling entry/exit to the site, securing the boundaries of the site, and establishing designating entry/exit points (if they do not already exist). Entry/exit to the site should be documented. | Being implemented | Yes |
| | | Training security staff on the (enhanced) system that has been put in place for securing the site and controlling entry and exit, the behaviors required of them in enforcing such system and any COVID -19 specific considerations. | Being implemented Personnel responsible for COVID-19 management and monitoring has been appointed by the IAs, CSC and contractors | Yes |
| | | Training staff who will be monitoring entry to the site, providing them with the resources they need to document entry of workers, conducting temperature checks and recording details of any worker that is denied entry. | Being implemented The Personnel Health Monitoring Record Sheet has been filled regularly by staff on duty. Construction Workers shall return to their posts with a negative PCR test result | Yes |

| Item | Potential impacts / issues | Mitigation measures | Implementation status | Whether in compliance (Yes/No) |
|------|----------------------------|---|--|--------------------------------|
| | | Confirming that workers are fit for work before they enter the site or start work. While procedures should already be in place for this, special attention should be paid to workers with underlying health issues or who may be otherwise at risk. Consideration should be given to demobilization of staff with underlying health issues. | Being implemented COVID-19 prevention and control policies and measures are informed to all project workers | Yes |
| | | Checking and recording temperatures of workers and other people entering the site or requiring self-reporting prior to or on entering the site. | Being implemented The temperature of workers is monitored before entering the site from June to November 2022. Since December, workers will no longer be required to take temperature monitoring according to the National COVID-19 Prevention and Control Plan | Yes |
| | | Providing daily briefings to workers prior to commencing work, focusing on COVID-19 specific considerations including cough etiquette, hand hygiene and distancing measures, using demonstrations and participatory methods. | Being implemented | Yes |
| | | During the daily briefings, reminding workers to self-monitor for possible symptoms (fever, cough) and to report to their supervisor or the COVID-19 focal point if they have symptoms or are feeling unwell. | Being implemented | Yes |
| | | Preventing a worker from an affected area or who has been in contact with an infected person from returning to the site for 14 days or (if that is not possible) isolating such worker for 14 days. | Being implemented | Yes |

| Item | Potential impacts / issues | Mitigation measures | Implementation status | Whether in compliance (Yes/No) |
|------|----------------------------|--|--|--------------------------------|
| | | Preventing a sick worker from entering the site, referring them to local health facilities if necessary or requiring them to isolate at home for 14 days. | Being implemented | Yes |
| | | (c) Workers should wear appropriate personal protective equipment (PPE), which includes protective outerwear, gloves, boots, goggles or a face shield, and a mask; they should perform hand hygiene frequently; and they should avoid touching eyes, nose, and mouth with unwashed hands. | Being implemented | Yes |
| | | Train field workers and staff | Being implemented COVID-19 prevention and control policies and measures are informed to all project workers | Yes |
| | | Placing posters and signs around the site, with images and text in local languages. | Being implemented | Yes |
| | | Ensuring handwashing facilities supplied with soap, disposable paper towels and closed waste bins exist at key places throughout site, including at entrances/exits to work areas; where there is a toilet, canteen or food distribution, or provision of drinking water; in worker accommodation; at waste stations; at stores; and in common spaces. Where handwashing facilities do not exist or are not adequate, arrangements should be made to set them up. Alcohol based sanitizer (if available, 60-95% alcohol) can also be used. | Being implemented | Yes |
| | | Setting aside part of worker accommodation for precautionary self-quarantine as well as more formal isolation of | Being implemented | Yes |

| Item | Potential impacts / issues | Mitigation measures | Implementation status | Whether in compliance (Yes/No) |
|------|----------------------------|---|--|--------------------------------|
| | | staff who may be infected. | | |
| | | (d) Conduct regular and thorough cleaning of all site facilities, including offices, accommodation, canteens, common spaces. | Being implemented | Yes |
| | | Providing cleaning staff with adequate cleaning equipment, materials and disinfectant. | Being implemented | Yes |
| | | Review general cleaning systems, training cleaning staff on appropriate cleaning procedures and appropriate frequency in high use or high-risk areas. | Being implemented | Yes |
| | | Where it is anticipated that cleaners will be required to clean areas that have been or are suspected to have been contaminated with COVID-19, providing them with appropriate PPE: gowns or aprons, gloves, eye protection (masks, goggles or face screens) and boots or closed work shoes. If appropriate PPE is not available, cleaners should be provided with best available alternatives. | Being implemented | Yes |
| | | Training cleaners in proper hygiene (including handwashing) prior to, during and after conducting cleaning activities; how to safely use PPE (where required); in waste control (including for used PPE and cleaning materials). | Being implemented | Yes |
| | | (e) If a worker has symptoms of COVID-19 (e.g. fever, dry cough, fatigue) the worker should be removed immediately from work activities and isolated on site. | During the COVID-19 pandemic in China in December 2022, all project staff with symptoms similar to COVID-19 are under home quarantine in accordance with the requirements of EMP and the COVID-19 Prevention | Yes |
| | | If testing is available on site, the worker should be tested on site. If a test is not available at site, | | Yes |

| Item | Potential impacts / issues | Mitigation measures | Implementation status | Whether in compliance (Yes/No) |
|------|----------------------------|---|---|--------------------------------|
| | | the worker should be transported to the local health facilities to be tested (if testing is available). | and Control Plan issued by the National Health Commission of the PRC | |
| | | If the test is positive for COVID-19 or no testing is available, the worker should continue to be isolated. This will either be at the work site or at home. If at home, the worker should be transported to their home in transportation provided by the project. | After the symptoms disappear, the confirmed personnel shall return to their posts with a negative PCR test result No cases of severe illness or death due to COVID-19 pandemic have been reported during this period | Yes |
| | | Extensive cleaning procedures with high-alcohol content disinfectant should be undertaken in the area where the worker was present, prior to any further work being undertaken in that area. Tools used by the worker should be cleaned using disinfectant and PPE disposed of. | | Yes |
| | | Co-workers (i.e. workers with whom the sick worker was in close contact) should be required to stop work, and be required to quarantine themselves for 14 days, even if they have no symptoms. | | Yes |
| | | Family and other close contacts of the worker should be required to quarantine themselves for 14 days, even if they have no symptoms. | | Yes |
| | | If a case of COVID-19 is confirmed in a worker on the site, visitors should be restricted from entering the site and worker groups should be isolated from each other as much as possible. | | Yes |
| | | If workers live at home and has a family member who has a confirmed or suspected case of COVID-19, the worker should quarantine themselves and not be allowed on the project site for | | Yes |

| Item | Potential impacts / issues | Mitigation measures | Implementation status | Whether in compliance (Yes/No) |
|------|----------------------------|---|-----------------------|--------------------------------|
| | | 14 days, even if they have no symptoms. | | |
| | | Workers should continue to be paid throughout periods of illness, isolation or quarantine, or if they are required to stop work, in accordance with national law. | | Yes |
| | | Medical care (whether on site or in a local hospital or clinic) required by a worker should be paid for by the employer. | | Yes |
| | | (f) Training of workers should be conducted regularly, providing workers with a clear understanding of how they are expected to behave and carry out their work duties. | Being implemented | Yes |
| | | Training should address issues of discrimination or prejudice if a worker becomes ill and provide an understanding of the trajectory of the virus, where workers return to work. | Being implemented | Yes |
| | | Training should cover all issues that would normally be required on the work site, including use of safety procedures, use of construction PPE, occupational health and safety issues, and code of conduct, taking into account that work practices may have been adjusted. | Being implemented | Yes |

Table 3-2 Potential impacts and mitigation measures during operations

| Item | Potential impacts / issues | Mitigation measures | Implementation status | Whether in compliance (Yes/No) |
|-------------------------------------|---|--|--|--------------------------------|
| Point source water pollution | Treated effluent from rural onsite wastewater treatment stations and domestic wastewater from tourism toilets | <ul style="list-style-type: none"> Establish O&M procedures for rural WWTS. This will include: (a) routine inspection of WWTS performance and condition, to reduce the risk of operational failures; (b) emergency response plan, for clear procedures to quickly address mechanical or electrical failure (e.g. clogged pipes or rural power blackouts). | <p>Being implemented</p> <p>The operated WWTS in Tunxi and Huizhou District recruited a qualified third-party agency to be responsible for the equipment operation and maintenance according to the requirements of the local authorities</p> <p>The PMO, EEB and the external monitoring agency regularly supervise the working conditions of the WWTS</p> | Yes |
| Sludge disposal | Inadequate disposal of sludge from the project supported WWTS | <ul style="list-style-type: none"> In accordance with national regulations, the raw sludge will be transported by sealed truck one to two times per year to the five county and district wastewater treatment plants that are operating in each project county and district. Upon completion of the Huangshan Municipal WWTP Sludge and Kitchen Waste Treatment Plant (estimated to be in August 2020), all project sludge will be transported to this new plant. Due diligence has been conducted on these plants (Section III.D). All are operating in compliance with regulatory requirements. The treated sludge will be disposed in landfill or used as fertilizer for landscaping | <p>Being implemented.</p> <p>The pollutants in the effluent of the WWTS under operation in Tunxi District and Huizhou District comply with the limits of Class 1B in the Pollutant Discharge Standard for Urban Sewage Treatment Plants (GB 18918-2002) as required by EIA.</p> <p>For the three WWTS that are in operation, it is planned the treated sludge will be disposed in landfill once practical quantities for transport is reached.</p> | Yes |
| Non-point source pollution | Soil and water pollution due to use of agri-chemicals | <ul style="list-style-type: none"> All use of agricultural chemicals under the project will be subject to the project training and measures to reduce the use of chemical fertilizers and pesticides | <p>Being implemented</p> <p>There is no pesticides classified by the WHO as Class I or Class II hazard or prohibited or strictly restricted for use according to China's National Pesticide Management Regulations have been used.</p> | Yes |

| | | | | |
|---------------------------|--|--|--|--|
| <p>Ambient air</p> | <p>Exhaust gas from vehicles and odor from WWTS with associated septic tanks and pumping stations, tourism toilets, and garbage bins</p> | <p>Tourist facilities (parking lots, toilets, bins)</p> <ul style="list-style-type: none"> • Design and implement strict and clear procedures for O&M of the public tourism toilets, including daily cleaning, to maintain hygiene and minimize disease risks. • Install garbage bins at each public toilet. Bins will have covers, to prevent flies and rodents accessing the litter. • Implement daily waste collection schedule for the emptying and removal of litter from the garbage bins. • Garbage bins with cover will be used for enclosed storage of waste • Layout design of the parking lots will facilitate efficient entry and exit of vehicles, to reduce traffic congestion and gas emissions from vehicle exhaust gas caused by idling. • Implement procedures for O&M of landscaping around the parking lots and toilets. • Periodical inspection on the condition and O&M of the public toilets, litter bins, parking lots, landscaping to ensure efficient operation <p>Wastewater treatment stations</p> <ul style="list-style-type: none"> • Regular O&M of facilities to ensure optimal performance • Periodical inspection on performance • Periodical sampling of air quality and odor at established distances from each station (Table EMP-5) • Consultations with nearby communities as needed to assess whether there are odor-related issues | <p>Being implemented.</p> <p>Public tourist toilets and parking lot are managed by local authorities.</p> <p>The NH₃ and H₂S of WWTS in Tunxi District and Huizhou District have been monitored in the second half of 2022, and the results comply with the limits set up in Appendix D of Technical Guidelines of EIA – Atmospheric Environment (HJ 2.2-2018)</p> | |
|---------------------------|--|--|--|--|

| | | | | |
|--------------------|---|---|---|-----|
| Noise | Noise from the 23 wastewater pumping stations | <ul style="list-style-type: none"> • Each station will install low-noise equipment and thick walls. • The pumps will be equipped with anti-vibration pad. • Sound insulation windows and doors will be used in the stations. • Station operators will maintain the equipment in good working condition as part of standard operating procedures. Periodical check and maintenance will be required. When malfunction of the equipment occurs, the related accessories or parts will be replaced timely to avoid noise from abnormal operation of pumps. | <p>Being implemented</p> <p>The 9 completed pumping stations (eight in Tunxi District and one in Huizhou District) have been either buried underground or enclosed by walls.</p> <p>The monitoring results of noise of pumping stations in Tunxi and Huizhou District comply with the limits of Class II of “Emission Standard for Industrial Enterprises Noise at Boundary”(GB12348-2008) in the second half of 2022</p> | Yes |
| Solid waste | Domestic waste from tourists | <ul style="list-style-type: none"> • Arrange with municipal waste collection services for regular collection of the tourism waste. • Burning of waste is strictly prohibited. • Ensure the garbage bins in tourism area are protected from birds and vermin, and emptied daily by the municipal waste collection systems. | <p>Being implemented</p> <p>The local sanitation department has been responsible for normalized waste collection.</p> | Yes |

| | | | | |
|---|--------------------------------------|---|---|-----|
| Health and safety of operating staff | Health and safety of operating staff | <p>The COVID-19 outbreak prevention and control measures are as following:</p> <ul style="list-style-type: none"> • Enterprises shall equip sufficient protective materials including masks, alcohol, disinfectant and thermometers, arrange employees to work and dine in different periods, and prevent employees from having activities and conferences together. The employees at work shall take temperatures twice a day and be recorded, and shall be supervised to wear masks during office time. The plant area, office area and other key areas shall be cleaned and sterilized regularly. If symptoms of acute respiratory infections such as fever, cough and shortness of breath occur to any employees, please go to the designated medical institutions in our city for test, diagnosis and treatment, and report to PMO at first time. • Enterprises hang slogans of pandemic prevention and control in plant areas and office areas, send short messages and post texts on WeChat, in order to provide employees with science knowledge about the pandemic and ease them from unnecessary panic. Employees shall be urged to protect themselves, and accept temperature testing and recording when they go into and out of the industrial park. • Further carrying out training on pandemic prevention and control. On the principles of precise resumption of work and production in different divisions and levels according to the requirements for pandemic prevention and control, a training program of medical staff against the pandemic shall be carried out in key units and industries related to the national economy and people's livelihood. The trainees will be designated by relevant district sectors and towns/sub-districts according to the status of resumption of work, production and school. Each unit/enterprise shall designate one medical staff against the pandemic to join the training. | <p>Being implemented</p> <p>All construction workers shall return to their posts with a negative PCR test result and fill in the health monitoring form every day from June to November 2022; the contractor on-site office is equipped with epidemic prevention supplies; this includes information dissemination of epidemic prevention and control policies and measures to all project personnel. Since December, the negative PCR test result is no longer mandatory for all construction workers according National COVID-19 Prevention and Control Plan.</p> <p>Publicity boards for COVID-19 epidemic prevention and control have been established on the construction site and offices. Education for employees to understand the COVID-19 epidemic scientifically through SMS, Wechat and other channels.</p> | Yes |
|---|--------------------------------------|---|---|-----|

36. **Conclusion.** Mitigation measures in the environmental management plan are being implemented as required and the project meets the requirements of the environmental management plan.

C. Implementation of GIF / ESMS

37. **Institutional setup.** The HTIC setup an Environmental and Social Office and appointed three environmental environment persons (two major in environment) and three social persons (two major in social) for management of the implementation of ESMS. Through on-job trainings provided by LIEC every year, these staff demonstrated good understanding of their responsibilities and requirements of ESMS and have gain practical experience during implementation of ESMS. They are quite familiar with the ESMS-six steps. However, they are still weak in updating REA checklist and translation of technical terms. (ii) The HTIC has issued a formal Presidential Directive and integrated the ESMS within HTIC business procedures in September 2020.

38. **Project screening.** In the second half of 2022, HTIC screened the projects applying for GIF in strict accordance with the ESMS requirements, and preliminarily assessed whether the projects met the requirements of the GIF. By the time of writing this report, a total of 5 sub-projects have been evaluated, 1 subproject (Yixian Younong Ecological Agriculture Co., Ltd.) was selected and under implementation, 1 sub-projects (Huangshan Tianzhidu) was selected but has not sign contract, 1 subproject (Huangshan Mijing Tourism) is selected for further due diligence, and 2 subprojects (Huangshan Guoda and She County Tourism) were dropped.

39. **The agricultural socialization service of the first investment subproject is being conducted.** Yixian Younong Ecological Agriculture Co., Ltd., hereinafter referred to as Younong Company provided 7 agricultural cooperatives and 7 family farms with full process socialized agricultural services, such as seedling raising, mechanical ploughing, mechanical transplanting and transplanting, basal fertilizer application, pest control and weed control, and harvesting (*Brassica napus*, corn), covering a total farmland area of 8,757 mu. For this subproject, there is no environmental requirement (such as EIA Register Form) from local Ecology and Environment Bureau (EEB) due to the negative environment impact caused by faming activities is minor.

40. In the second half of 2022, the due diligence for the second investee, Huangshan Tianzhidu Environmental Technology Development Co., LTD. , hereinafter referred to as Huangshan Tianzhidu, has been completed, and the No Objection from ADB has been received on September 13, 2022. As of December 31, 2022, the agreement of equity investment program is being prepared and is expected to be published and signed in the first quarter of 2023. For this subproject, DEIA was prepared and approved by Huangshan EEB on 26 July 2022.

41. **Benefit and improvement of GIF implementation during this stage.** Through the socialized agricultural services by Younong Company, i) the amount of seed used per mu was reduced by 30%, and the yield per mu increased by 8-10%, by popularizing the precision sowing machine transplanting technology; ii) in order to promote new rice varieties (non-transgenic varieties) and ecological efficient cultivation techniques, 110 mu of experimental demonstration fields were sown. Under the condition of no urea and herbicide, the average yield of dry rice per mu reached 1410 jin, which increased by more than 40% compared with the original yield of rice per mu in mountainous areas; iii) 70% of the straw was bundled away from the field, and 30% of the straw was crushed and returned to the

field. The use of pesticides and herbicides has been greatly reduced by highly mechanized farming (e.g. using rice transplanter, unmanned aerial vehicle for plant protection, agricultural machinery that comply with National V Emission Standard) and intensive land cultivation management. In the second half of 2022, the first sub-project won a series of social honors. Including: (1) Gold Award awarded by Anhui Straw and Livestock Waste Comprehensive Utilization Industry Expo2022; (2) Younong Business Model, written by the sub-project and the team of Anhui University of Finance and Economics, won the first prize of the 5th "Outstanding Developer" Case Study in 2022 (top 2 in China); (3) Zhang Guozhen, Deputy General Manager of the Sales Department, was awarded the title of "Local Expert" of RuralHuangshan in 2022 by Huangshan Agriculture and Rural Bureau.

42. Innovation of GIF funded sub-projects. Many innovative technologies and research results have been applied in the investment activities of Younong Company. i) Feed plants evenly and accurately by intelligent fertilizer spreader to avoid fertilizer waste and difficult fertilizer transportation in the farmland. ii) The proposed application of weeding robots to eliminate herbicides is planned to be piloted on farmlands in 2023. iii) Cooperate with Nanjing Agricultural University to conduct a technical research and development on "Research on Key technologies of biochar Production of Straw and its industrial application", and plan to conduct farmland pilot in 2023. iv) Study on the application of carbon-based organic fertilizer in planting of black corn and Huangshan tribute chrysanthemum in Longjiang Village, Yixian County and Dingtian Village, Shexian County, has been conducted, respectively. The results showed that carbon-based organic fertilizer could improve the yield and quality of both crops, and it is expected to be promoted in 2023. v) Digital terminal equipment such as weather stations, soil sensors, and high-definition cameras has been installed in service areas; an APP for farmland personnel management has been developed; and a visual data platform combined with land information has been established and is planned to be conducted in 2023.

43. Issues and proposed solutions of GIF funded subprojects. In the second half of 2022, during the implementation of the project, the implementing agency found that the original approved Environmental and Social Management System could not meet the environmental assessment requirements for other types of projects, such as the ecological and environmental safeguard projects, cultural and tourism projects etc. The main problems encountered were as follows: (i) Different from previous agricultural projects, these new types of projects, such as industrial projects and cultural and tourism projects, have more complex and strict requirements on environmental safeguard and social aspects, and higher professional requirements on staff, so the previous domestic due diligence experience is not very applicable. (ii) The audit report, progress report and project evaluation report of the fund project were full of professional terms, which requires high-quality translation, and the current translation ability cannot meet the requirements. For the above issues, the HTIC has taken the following actions: (i) Strengthened communication with the HPMO and LIEC to seek for technical support. (ii) Submitted application for the grant from KfW, and hope to obtain technical assistance, training and other ways to strengthen the institutional capacity of implementation. Regarding the challenges faced in IA's implementing ESMS-related activities, the following suggestions are put forward: (i) The LIEC will provide training on project practice and translation of professional terms, such as the provision of a cross-reference table of environmental assessment terms in Chinese and English; (ii) HPMO will actively seek for other policies, funds, resources and other support for sub-projects, including sub-projects that have already been invested and those to be invested in, so as to effectively promote sustainable development.

44. **Monitoring and reporting of GIF funded subprojects.** In the second half of 2022, HTIC/HXIC, took regular management measures for the implementation of the sub-projects, including checking the risk information of the sub-projects once a week, and conducting twice on-site inspections. The sub-projects are effectively supervised. The 3rd GIF Implementation report has been submitted by HTIC in accordance with the requirements of LA and PA.

45. **Information disclosure and GRM.** No information has been disclosed for the current half-year period as there is no new investment activity. The agreement for the second GIF sub-project is expected to be published and signed in the first quarter of 2023. Based on feedback from ADB experts, it is planned to extend the information disclosure period for the second investment project from 10 days to half a year after the completion of the investment activity. The subproject does not involve civil works. This only involves procurement and installation of 4 molecular sieve runner production lines and 4 low temperature plate SCR denitration catalyst production lines and was classified as category C for environment safeguard. However, residents within the scope of sub-project activities, especially women and poor people, can still submit complaints directly to the implementing agency on environmental and social issues at any time. During the reporting period, the implementing agencies and sub-projects did not receive any complaints.

46. **Training and capacity building for GIF.** The investee (Younong Company), encouraged by HTIC/HXIC, conducted 8 times of safety production and technical training for various agricultural production and agricultural machinery operation, with a total of 177 participants, including 36 women.

47. **Next step plan.** i) In accordance with the implementation steps of ESMS, continue to track, monitor and report all sub-projects, ii) urge sub-projects to continue to pay attention to and implement EMP in activities; iii) training of stakeholders, especially the staff of the implementing agency and the staff of sub-projects, should be strengthened to apply ESMS steps for screening, identification and post-investment management of sub-projects; iv) Strengthen information dissemination and training: Continue to promote the understanding of implementing agency staff and sub-project staff about the overall project and requirement of EMP/ESMS. v) Complete the signing of the second investment sub-project contract and the payment of investment funds.

48. **Conclusion.** The investment projects under GIF are being carried out in accordance with the requirements of the Environmental and Social Management System (ESMS). HTIC/HXIC found that, compared with those without implementation of ESMS, sub-projects paid more attention to environmental and social development after implementing ESMS, sub-projects were able to pay more attention to agricultural technology upgrading, and provided more training opportunities for women, which indicates the ESMS has been integrated into sub-project activities.

D. Environmental Monitoring

49. Environmental protection monitoring, including internal monitoring, external monitoring, compliance monitoring, was implemented during the reporting period.

50. **Internal monitoring.** (i) Regular site inspections have been performed by the CSCs on a daily basis; (ii) Regular site inspections have been performed by the IAs Environment Officer with assistance of CSCs on a weekly basis. The internal monitoring results have been prepared by the CSCs and submitted to IAs for review on a monthly basis (iii) Random site inspections performed by HPMO and CPMOs. The consulting company assists in carrying out on-site EHS supervision in daily management. On-site supervision for three to four districts/counties construction sites per month to all construction units and supervision companies on introduction of ADB's environmental management policies and site specific EMP requirements.

Table 3-3 Summary of on-site supervision by IAs and consulting company

| From | To | Visited Districts/Counties | Number of Visited Construction Sites |
|------------|------------|--|--------------------------------------|
| 2022/7/4 | 2022/7/8 | She County, Xiuning County, Yi County, Qimen County, Tunxi District, Municipal Departments | 8 |
| 2022/7/26 | 2022/7/27 | She County | 3 |
| 2022/8/15 | 2022/8/19 | Qimen County, She County, Xiuning County, Huizhou District, Municipal Departments | 8 |
| 2022/9/14 | 2022/9/16 | Xiuning County, She County, Qimen County | 5 |
| 2022/9/29 | 2022/9/30 | Xiuning County, She County | 3 |
| 2022/10/10 | 2022/10/13 | Xiuning County, Qimen County, She County, Huangshan District | 11 |
| 2022/11/9 | 2022/11/11 | She County, Xiuning County, Yi County, Huangshan District | 7 |



Problem found - lack of management of WWTS in Zhongze Village, Tunxi District



After corrective action



Problem found - no displacement monitoring was carried out for the houses near the road excavation.



After corrective action (construction workers are carrying out displacement monitoring for the ground and houses)



Problem found - cracks were found in the slope and there was a risk of collapse



After corrective action



Problems found - earth excavation work near existing underground pipelines were not supervised by personnel



After corrective action

| | |
|--|--|
|  <p>Problem found - There is no separation between the roller work area and the pedestrian area</p> |  <p>After corrective action (a temporary boundary was immediately installed)</p> |
|--|--|

51. **External environmental monitoring.** The environmental monitoring work in the second half of 2022 has implemented by external environmental monitoring unit (Huangshan Angel Environmental Monitoring Co. , Ltd.) recruited by LIEC.

52. Table 4 summarizes the external monitoring plan and implementation status of EMP. Of the 26 awarded civil work contracts, 8 have been completed and 18 are in construction stage (13 normal construction, 2 scattered construction and 3 suspension during monitoring period). On-sites monitoring for 13 civil works contracts with ongoing construction has been conducted. The monitoring items include ambient air quality (total suspended particulate matter) and noise (equivalent continuous a-weighted sound pressure level) during construction. The monitoring of the operating WWTS and pumping stations in Huizhou District and Tunxi District was carried out and the monitoring items included the ambient air quality (hydrogen sulfide and ammonia), water quality of influent and effluent (pH, CODcr, SS, NH3-N, TP) of WWTS and noise of pumping stations.

Table 4: Environmental Monitoring Program and Implementation Status

| Subject | Parameter | Location | Frequency | Implement Supervise |
|---|--|---|---|---------------------|
| Internal monitoring (contractors, CSCs, HPMO and IA Environment Officers) | | | | |
| Ambient air quality | Dust mitigation | Visual inspection at all construction sites | 1 time / week | Being implemented |
| Noise | <ul style="list-style-type: none"> • LAeq: measured with hand-held meter • Consultations with affected residents | <ul style="list-style-type: none"> • At each construction site boundary • Settlements within 60 m of construction works – see Table EMP-2 and IEE Section V.3 | Daily measurements and consultations or as needed during peak construction levels at individual sites | Being implemented |
| Solid waste | Domestic and construction waste | Visual inspection at all construction sites and work-camps | Daily | Being implemented |

| Subject | Parameter | Location | Frequency | Implement Supervise |
|--|--|--|---|--|
| Soil erosion | On-site management of soil erosion | Visual inspection at spoil sites and all construction sites | 1 time / week; and immediately after heavy rainfall | Being implemented |
| Community health and safety | Measures for traffic management and on-site safety described in in Table EMP-2 | Construction sites and public roads and paths | Daily during construction at all individual sites | Being implemented |
| Occupational health and safety | Camp hygiene, safety, availability of clean water | Inspection at all construction sites and work-camps | 1 time / week | Existing house are leased for all on-site offices and the domestic wastewater is discharged through the existing pipe. No temporary buildings involved. |
| External monitoring (certified environment monitoring agency) | | | | |
| Water quality | SS, petroleum | Onsite treated construction wastewater (by oil-water separator and/or sedimentation tank) | 1 time / month during construction | Construction wastewater treated on site has not yet been involved |
| Ambient air quality | Dust: TSP | All construction sites (at least 1 point upwind and 1 point downwind) and the nearest sensitive receptor | 1 time / month during construction | Being implemented. The monitoring results mostly comply with the limits of Grade II in the Ambient Air Quality Standards (GB 3095-2012). |
| Noise | L _{Aeq} | Boundaries of all construction sites and the nearest sensitive receptor for each construction site | 1 time / month (twice a day: once in daytime and once at nighttime, for 2 consecutive days) during construction | Being implemented. The monitoring results of construction boundaries comply with the applicable limits in Emission Standard of Environment Noise for boundary of Construction Site (GB 12523-2011). The monitoring results of sensitive receptor comply with the applicable limits of Class II in Ambient Acoustic Quality Standard (GB3096-2008) for villages and residential communities |
| Operation phase | | | | |
| Water quality of effluent | pH, COD _{Cr} | Influent and effluent | 4 times / year | The pollutants in the effluent of the WWTS under operation in |

| Subject | Parameter | Location | Frequency | Implement Supervise |
|---------------------|--|--|---|--|
| from WWTS | SS, NH ₃ -N, TP | from WWTS | | Tunxi District and Huizhou District comply with the limits of Class 1B in the Pollutant Discharge Standard for Urban Sewage Treatment Plants (GB 18918-2002) as required by EIA. |
| Ambient air quality | Odor: NH ₃ and H ₂ S | At the nearest sensitive receptor from WWTS (1 point upwind and 2 points downwind) | 2 times / year | Be implemented. The results can comply with the limits set up in Appendix D of Technical Guidelines of EIA – Atmospheric Environment (HJ 2.2-2018) |
| Noise | LAeq | At boundary of pump stations (IEE Section V.E) and the nearest sensitive receptor | 2 times / year (twice a day: once in daytime and once at nighttime) | Be implemented. The monitoring results of construction boundaries can comply with the limits of Class II in “Emission Standard for Industrial Enterprises Noise at Boundary”(GB12348-2008) The monitoring results of sensitive receptor can comply with the limits of Class II in Ambient Acoustic Quality Standard (GB3096-2008) for villages and residential communities |

53. Tables 5-1~5 summarize the details of the external monitoring results during the reporting period. Appendix 2 lists the monitoring locations, Monitoring Items, methods and results while Appendix 3 presents photos of the external monitoring site.

Table 5-1 Ambient air quality monitoring during construction period
(Unit: mg/m³)

| Location | | Sampling date | Monitoring Item- TSP | | |
|------------|----------------------------|---------------|-----------------------------|-------------------------------|-----------------|
| | | | Upwind of construction site | Downwind of construction site | Sensitive Point |
| She County | Zikeng Village, Xitou Town | Nov 15, 2022 | 0.233 | 0.317 | 0.333 |
| | Urban Area | Nov 15, 2022 | 0.217 | 0.367 | 0.333 |
| Xiuning | Urban Area | Nov 16, 2022 | 0.250 | 0.333 | 0.317 |

| Location | | Sampling date | Monitoring Item- TSP | | |
|---|---------------------------------|---------------|-----------------------------|-------------------------------|-----------------|
| | | | Upwind of construction site | Downwind of construction site | Sensitive Point |
| County | Xiongjia Village, Xikou Town | Nov 14, 2022 | 0.233 | 0.317 | 0.367 |
| | Yaotian Village, Shangshan Town | Nov 17, 2022 | 0.217 | 0.367 | 0.317 |
| Qimen County | Urban Area | Nov 23, 2022 | 0.217 | 0.333 | 0.350 |
| | Urban Area | | 0.233 | 0.317 | 0.367 |
| Grade II of the Ambient Air Quality Standards (GB 3095-2012) | | | | | 0.3 |
| PRC Integrated Emission Standard of Air Pollutants (GB16297-1996) | | | 1.0 | | |

Table 5-2 Noise environment monitoring during construction period
(Unit: Leq dB(A))

| Location | | | Sampling date | Monitoring Item-Noise | |
|----------------|---------------------------------|-------------------|-----------------|-----------------------|-------|
| | | | | Day 1 | Day 2 |
| She County | Zikeng Village, Xitou Town | Construction site | Nov 15-16, 2022 | 58.5 | 67.4 |
| | | Sensitive Point | | 58.5 | 59.5 |
| | Urban Area | Construction site | Nov 15-16, 2022 | 61.9 | 60.5 |
| | | Sensitive Point | | 65.0 | 62.5 |
| Xiuning County | Urban Area | Construction site | Nov 15-16, 2022 | 62.1 | 65.5 |
| | | Sensitive Point | | 56.9 | 57.4 |
| | Xiongjia Village, Xikou Town | Factory Boundary | Nov 14-15, 2022 | 59.7 | 65.7 |
| | | Sensitive Point | | 56.2 | 56.3 |
| | Yaotian Village, Shangshan Town | Factory Boundary | Nov 16-17, 2022 | 55.9 | 54.0 |
| | | Sensitive Point | | 56.6 | 55.6 |
| Qimen County | Urban Area | Construction site | Nov 22-23, 2022 | 69.4 | 65.9 |
| | | Sensitive Point | | 57.8 | 59.4 |
| | Urban Area | Construction site | | 63.2 | 66.1 |
| | | Sensitive Point | | 55.0 | 55.8 |

Note: For construction site, applicable limits for noise emission are 70 dB(A) (daytime) and 55 dB (A) (nighttime) as specified in Emission Standard of Environment Noise for boundary of Construction Site (GB12523-2011). For sensitive point, applicable limits for noise levels are 60 dB(A) (daytime) and 50

dB (A) (nighttime) as specified in Class II Ambient Acoustic Quality Standard of GB3096-2008 for villages and residential communities.

Table 5-3 Water quality monitoring of operating sewage treatment stations

(Unit: mg/L (pH: dimensionless; water temperature:°C)

| Location | | Sampling date | Monitoring Item | | | | | |
|---|--|---------------|-------------------|-----|-------------------|----|--------------------|------|
| | | | Water Temperature | pH | COD _{Cr} | SS | NH ₃ -N | TP |
| Influent of WWTS in Yangcun Township, Huizhou District | | Nov 15, 2022 | 12.4 | 7.6 | 13 | 15 | 0.203 | 0.82 |
| Effluent of WWTS in Yangcun Township, Huizhou District | | | 12.3 | 7.3 | 8 | 8 | 0.054 | 0.48 |
| | | | | | | | | |
| Influent of WWTS in Zhongze Village, Yiqi Township, Tunxi District | | Nov 14, 2022 | 12.9 | 7.8 | 15 | 35 | 56.3 | 7.72 |
| Effluent of WWTS in Zhongze Village, Yiqi Township, Tunxi District | | | 12.7 | 7.3 | 8 | 11 | 0.060 | 1.15 |
| | | | | | | | | |
| Class I-B of Discharge Standard of Pollutants for Municipal WWTP (GB 18918-2002), | | | | 6-9 | 60 | 20 | 3 | 1 |

Note: The monitoring value of total phosphorus at the effluent of WWTS in Zhongze Village, Tunxi District is 1.15mg /L, slightly higher than the limits of Class 1-B. It is reported by Tunxi PMO that there have been cases of villagers climbing over fences to pump water from wetlands of the WWTS in November. This will affect the function of wetland, and the result of effluent quality monitoring in the following period (external monitoring time is November 17, 2022) exceeded the standard. Corrective actions have been taken include (i) the WWTS O&M unit (Huangshan Tuoda Technology Co. Ltd.) informed the village committee of Zhongze Village of this issue in November 2022; (ii) the village committee that has orally informed the villagers nearby of the risk of this improper behavior. Up to the end of November, the Zhongze WWTS had been operating normally. According to the third-party monitoring report provided by the operator (sampling date: November 24, 2022), the PH, COD_{Cr}, total phosphorus (0.45mg/L), ammonia nitrogen and SS at the effluent of Zhongze WWTS can all comply with the limits of Class 1-B.

The monitoring results in Zhongze Village WWTS are: pH 7.2, COD_{Cr} 12 mg/m³; TP 0.45 mg/m³; NH₃-N 2.25 mg/m³; SS 8 mg/m³; Animal and vegetable oil 0.16mg/m³

Table 5-4 Odor monitoring of operating sewage treatment stations
(Unit: mg/m³)

| Location | | Sampling date | Monitoring Item | |
|--|-----------------|---------------|------------------|-----------------|
| | | | H ₂ S | NH ₃ |
| WWTS in Yiqi Township, Tunxi District | Upwind | Nov 14, 2022 | 0.006 | ND |
| | Downwind | | 0.004 | 0.02 |
| | Sensitive Point | | 0.005 | ND |
| WWTS in Yangcun Township, Huizhou District | Upwind | Nov 15, 2022 | 0.005 | 0.03 |
| | Downwind | | 0.003 | 0.03 |
| | Sensitive Point | | 0.004 | 0.02 |
| Limits set up in Appendix D of Technical Guidelines of EIA – Atmospheric Environment (HJ 2.2-2018) | | | 0.01 | 0.2 |

Table 5-5 Monitoring situation of noise environment of pumping station during operation period
(Unit: Leq dB(A))

| Location | | Sampling date | Monitoring Item-noise | |
|---|-------------------------|---------------|-----------------------|----------|
| | | | Daytime | At night |
| Pumping Station in Yiqi Township, Tunxi District | Factory Boundary | Nov 15, 2022 | 47.6 | 43.3 |
| | Sensitive Point | | 47.2 | 44.7 |
| Pumping Station in Yangcun Township, Huizhou District | Factory Boundary | Nov 15, 2022 | 46.9 | 43.3 |
| | Sensitive Point | | 43.7 | 42.7 |
| Class II of Emission Standard for Industrial Enterprise Noise at Boundary (GB 12348-2008) | Construction Boundaries | | 60 | 50 |
| Class II of Ambient Acoustic Quality Standard of GB3096-2008 for villages and residential communities | Sensitive Point | | 60 | 50 |

54. **Compliance Monitoring.** The loan implementation consultant team officially started work in October 2020, including an environmental expert. The loan implementation environmental consultant reviewed the project progress and the implementation of the

environmental management plan based on the on-site inspection and the environmental monitoring report provided by the environmental monitoring agency.

55. The following tasks were carried out by loan implementing environmental consultant during the reporting period: (i) on-site visits, including municipal PMOs and county/district project sites; (ii) review of project documents such as research, preliminary design and bidding documents; (iii) environmental and social security training and communication for municipal/county PMOs, implementing agencies and Huangshan Trust and Investment Corporation; (iv) review of project progress and implementation of environmental management plan; and (vi) preparatory work for environmental monitoring and review for environmental monitoring reports; (vii) Assist municipal PMO environmental officers in the preparation and submission of the fifth semi-annual environmental monitoring report to ADB.

56. During the reporting period, PMOs, IAS and consultants have visited all the projects, in particular started construction site. The IAs and the contractors strictly abide by EMP and the requirements of domestic environmental protection, so as to ensure that the environment, occupational health and safety during the construction period are in good condition, and there are no adverse events related to the environment, occupational health and safety.

57. **Conclusion and next steps.** During the reporting period, all environmental monitoring work was carried out in compliance with the requirements of the environmental management plan, and the monitoring results showed that all environmental indicators met the national environmental quality standards. Monitoring activities for the next phase (January 1 to June 30, 2023) will be carried out in accordance with the EMP monitoring plan and schedules.

E. Public consultations and grievance redress mechanism

58. This section summarizes the implementation progress of public consultations and grievance redress mechanism during the current reporting period.

59. The project construction information was publicized and informed at the construction site of each subproject. Road closure information will also be issued in a timely manner to reduce travel troubles for residents during construction. Grievance redress channels have been further improved by sub-PMO and dissatisfactions and complaints of the affected population are collected and responded immediately by special personnel from each sub-PMO. The officer and his/her office address and communication information have been publicized in the project area. Smooth communication channels in townships and villages in the project area has been established to redress grievance, and the PMOs /implementation unit also invite them to participate in the design and implementation of the project.

60. An on-site survey on the environmental, social and resettlement of the affected people in the affected villages/ communities involved in the newly started civil work sub-project (i.e., for subprojects XN-3~7, SX-2, 7, 9, HS-3) has been conducted by IAs in the second half of 2022. During the construction period, construction information and environmental and social grievance redress channels were disclosed and published in each village adjacent to active construction sites. Project information boards included the data and contact information of managers. Based on feedback received, villagers generally expressed support for the construction activities and did not receive any dissatisfaction or complaints.



Publication of construction information and GRM in Wucheng Township of Xiuning County and Xinxikou Township of She County

Table 6: Public Consultation and Participation Plan

| Organizer | Approach | Times /Frequency | Subjects | Participants | Implementation status |
|-----------------|----------------------------------|---|--|-----------------------------|--|
| HPMO, IAs, LIEC | Site visits, informal interviews | At least once a week during peak construction | Construction impacts; adjusting mitigation measures if necessary; feedback | Affected persons Workers | Being implemented The IAs visited project sites at least once a |

| Organizer | Approach | Times /Frequency | Subjects | Participants | Implementation status |
|-----------|---------------------|---|---|------------------|---|
| | | | | | week and carried out informal interviews with affected persons and workers during peak construction from July to October. |
| | Site-specific basis | At least one month before the start of construction at any new site | Anticipated risks-noise, dust, etc. | Affected persons | The public consultation of EIA and EMP was implemented |
| | Public workshops | At least once during peak construction period | EMP implementation progress; construction impacts; adjusting mitigation measures if necessary; feedback | Affected persons | Being implemented |

61. In accordance with the EMP, any grievances which arise due to project activities will be managed through a grievance redress mechanism (GRM), as follows.

- Stage 1 (5 calendar days): If a concern arises during construction or operation, the affected person may submit a written or oral complaint to the contractor. The contractor will: (i) respectfully acknowledge the issue and immediately stop the causal activity; (ii) not resume the activity until the complaint has been resolved; (iii) inform the Project Managers of IAs of the incident on the same day of the incident occurring; (iv) give a clear reply to the affected person within two calendar days; and (v) as far as possible, resolve the problem within five calendar days from receiving the complaint.
- Stage 2 (5 calendar days): If the issue cannot be resolved in Stage 1, after five calendar days, the IAs and/or HPMO will take over responsibility. Eligibility of the complaint will be assessed, and a recommended solution given to the complainant and contractors within two calendar days. If the solution is agreed by the complainant, the contractors will implement the solution.
- Stage 3 (15 calendar days): If no solution can be identified by the HPMO and/or IA, and/or the complainant is not satisfied with the proposed solution, the HPMO and/or HPMO will organize, within seven (7) calendar days, a stakeholder meeting. A solution acceptable to all shall be identified including clear steps. The contractors will immediately implement the agreed solution.

62. The HPMO will report to ADB on all complaints and solutions according to the grievance redress mechanism, and relevant documents will be included in the progress report.

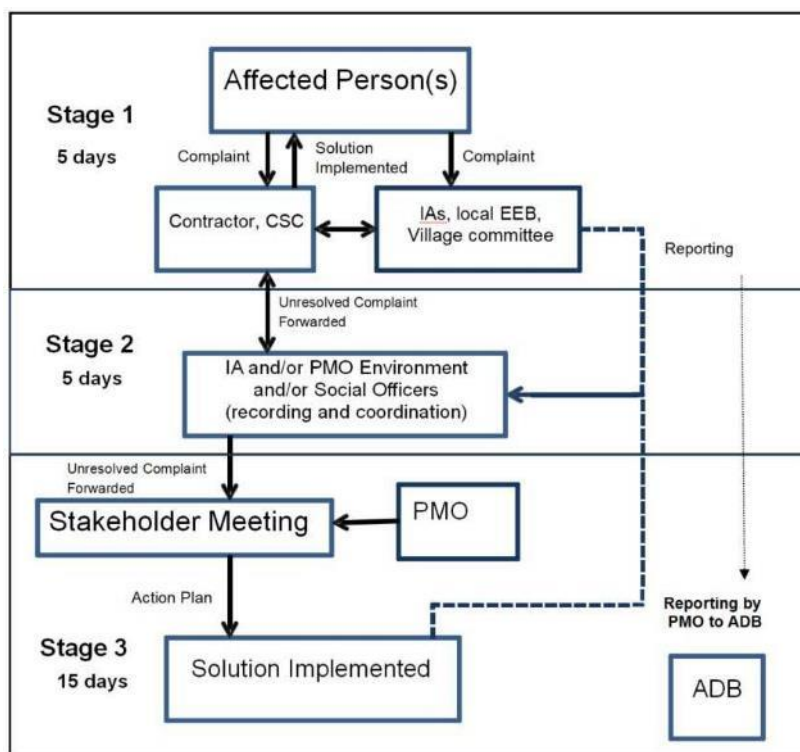


Figure 2 Operation Chart of the Grievance Redress Mechanism

ADB = Asian Development Bank, CSC = construction supervision company, EEB = ecology and environmental bureau, GRM = grievance redress mechanism, IA = implementing agency, HPMO = Huangshan Municipal project management office.

63. The grievance redress mechanism (GRM) of the project has been established as required during the reporting period, and the environmental and social officials of the Huangshan PMO and the project office of the three districts and four counties will act as the main coordinator for the implementation of the grievance redress mechanism. Prior to construction, the contact information (telephone number, address and email address) of the corresponding environmental coordinator will be made public on the information board of the construction site and the website of the local ecological environment bureau.

64. During the reporting period, the construction of 26 civil works contracts have been fully conducted/to be started, of which 8 contracts have been completed or almost completed. The project process is relatively smooth. Both of the public consultation and grievance redress mechanism in the process are implemented well. The PMO widely used various publicity measures such as the Internet and the media to achieve the purpose of informing stakeholders about construction activities.

65. **Conclusions and next steps.** The public consultation and grievance redress mechanism have been conducted well at the site where construction has been started and no complaints or grievance have been received. Public consultation will be regularly organized by the county/district PMO during the remaining implementation period. If there are any petitions and/or complaints, the relevant agencies will keep records.

F. Training and capacity building

66. Project implementing agencies in the three districts and four counties of Huangshan Municipality have no previous experience with ADB-funded projects and safeguard requirements. The experience of individual staff within the district and county EEBs for environmental management varies considerably.

67. Therefore, a capacity building program will be implemented on: (i) the EMP, including the mitigation measures, monitoring, and reporting; (ii) the grievance redress mechanism, including roles, responsibilities and procedures; (iii) procurement and contract management, focusing on EMP incorporation and implementation; (iv) operation and maintenance of the WWTS; and (v) measures for improved efficiency in the use of agricultural chemicals and water resources for agriculture.

68. Over the reporting period, on-site training and introduction on ADB's environmental management for PMOs, IAs, contractors, and Supervision companies at all levels were conducted monthly by relevant experts and LIEC. Table 7 shows the implementation of training and capacity-building during the reporting period.

Table 7: Training on environmental safeguards conducted during this reporting period

| Topics | Trainees | Training content | Date | # Trainees | | Outcomes |
|----------------------------------|--|---|--|---------------|----|---|
| | | | | M | F | |
| Construction site EHS management | County PMOs, implementation unit, design, supervision and contractor | EHS management training (including EMP, GRM, ESMS implementation) at the construction site of the project already started | During 6 times on-site inspection from July to December 2022 | 86 | 34 | Promoted the effective implementation of environmental management plans |
| Application of ESMS | LIEC | Training on EMP and ESMS compliance application | 17 August 2022 | 10 | 5 | Progress on the Tianzhidu sub-project has been pushed forward. The Environmental & Social due diligence report has been conducted and submitted to ADB for review, and ADB replied with no objection opinion on September 13 2022 |

69. **Conclusions and next steps.** After the training, participants had a basic understanding of the implementation of environmental management plans, monitoring and

reporting requirements and the concept and implementation of grievance redress mechanism. HTIC will continue to promote the understanding of implementing agency staff and sub-project staff about the overall project, ESMS, ADB's management requirements.

G. Compliance with loan and project agreement

70. Loan agreements and project agreements between the government and ADB include 25 environmental safeguards and/or guarantees related to environmental issues (or "terms"). This involves the timely and effective implementation of environmental management plans and specific project guarantees for current projects. Compliance with these terms is a condition of the loan and project agreement. The environmental safety and security provisions during the reporting period (including the environment, safeguards provisions, pre-construction preparation, safeguard and monitoring reports and grievance redress mechanism) and their implementation progress are described in Table 8.

Table 8 Compliance with environmental assurances

| Para No. | Description | Remarks / Issues | Type |
|-----------------|---|--|-------------|
| 10-11 | 10. HMG shall, and shall cause the IAs to, ensure that the preparation, design, construction, implementation, operation and decommissioning of the Project and all Project facilities comply with (a) all applicable laws and regulations of the Borrower relating to environment, health and safety; (b) the Environmental Safeguards; and (c) all measures and requirements set forth in the IEE, the EMP, and any corrective or preventative actions (i) set forth in a Safeguards Monitoring Report, or (ii) subsequently agreed between ADB and HMG. | In Compliance Details in Table 2-1 | Safeguards |
| | 11. HMG shall, and shall cause the IAs to, ensure that agricultural chemicals listed as hazardous under Classes I or II by the World Health Organization or listed as prohibited or strictly controlled use under the Borrower's national regulations for pesticide management are not to be used within the Project area. | | |
| 15 | 15. HMG shall, and shall cause the IAs to, make available necessary budgetary and human resources to fully implement the EMP and the RPs. | In Compliance | Safeguards |
| 16 | 16. HMG shall ensure that all bidding documents and contracts for Works entered into by HMG contain provisions that require contractors to: | In Compliance The terms and conditions listed have been incorporated into all bidding documents and civil works contracts | Safeguards |
| | (a) comply with the measures and requirements relevant to the contractor set forth in the IEE, EMP, the related RP (to the extent they concern impacts on the respective affected people under the Environmental Safeguards and the Involuntary Resettlement Safeguards during construction) and any corrective or preventative actions set forth in (i) a Safeguards Monitoring Report, or (ii) subsequently agreed between ADB and HMG; | | |
| | (b) make available a budget for all such environmental and social measures; | | |

| Para No. | Description | Remarks / Issues | Type |
|----------|--|---|------------|
| | <p>(c) provide HMG with a written notice of any unanticipated environmental, resettlement or indigenous peoples/ethnic minorities risks or impacts that arise during construction, implementation or operation of the Project that were not considered in the IEE, the EMP, and the RPs;</p> <p>(d) adequately record the condition of roads, agricultural land and other infrastructure prior to starting to transport materials and construction; and</p> <p>(e) fully reinstate pathways, other local infrastructure, and agricultural land to at least their pre-project condition as early as possible but no later than the completion of construction.</p> | | |
| 17 | <p>17. HMG shall ensure that each IA:</p> <p>(a) appoint at least one qualified environment officer and one social officer as full time Project management office staff to coordinate implementation of the EMP, the RP, and the GAP;</p> <p>(b) recruit a start-up loan implementation consultant to support the Project management office; and</p> <p>(c) ensure that the Project management office has engaged one external social monitoring specialist.</p> | In Compliance | Safeguards |
| 18 | Before and during the implementation of Works, HMG shall cause each IA to organize and conduct training on implementation and supervision of the EMP for construction supervision companies, and contractors, and shall ensure that the appropriate staff and officers receive such training. | In Compliance | Safeguards |
| 19 | <p>19. HMG shall do the following:</p> <p>(a) submit semiannual Safeguards Monitoring Reports to ADB until the issuance of ADB's Project completion report, unless a longer period is agreed in the EMP, and disclose relevant information from such reports to the respective affected people under the Environmental Safeguards promptly upon submission;</p> <p>(b) if any unanticipated environmental and/or social risks and impacts arise during construction, implementation or operation of the Project that were not considered in the IEE, the EMP, or the RP, promptly inform ADB of the occurrence of such risks or impacts, with detailed description of the event and proposed corrective action plan; and</p> <p>(c) report any actual or potential breach of compliance with the measures and requirements set forth in the EMP or the RP promptly after becoming aware of the breach.</p> | <p>In Compliance</p> <p>A total of 5 EMRs have been submitted (including this report)</p> | Safeguards |

| Para No. | Description | Remarks / Issues | Type |
|----------|---|------------------|------------|
| 20 | 20. HMG shall ensure that a safeguards grievance redress mechanism acceptable to ADB is established and maintained in accordance with the provisions of the IEE, the EMP, the RP and the PAM, to consider safeguards complaints | In Compliance | Safeguards |

H. Actions in ADB Memorandum of Understanding

71. Asian Development Bank (ADB) and Kreditanstalt Fuer Wiederaufbau (KfW) conducted a Loan Review Mission for Anhui Huangshan Xin'an River Ecological Protection and Green Development Project from 15 to 19 August 2022 and issued a Memorandum of Understanding (MOU). The MOU records identified issues and follow-up actions. Table 9 summarizes the environmental issues raised in the Mission, the corrective actions that need to be taken and the current status of them. Actions for the reporting period proposed in the MOU of ADB and KfW review mission in August 2022 are being implemented/have been completed as required including: (i) Submission the fourth Semi-annual environment monitoring report (EMR) is completed in August 2022, ii) Submission the 5th Semi-annual environment monitoring report (EMR) is completed in February 2023, (iii) Draft DEIA for project scope change is completed in February 2023 and is being revised; (vi) IEE addendum and updated EMP is under preparation and will be submitted to ADB by 31 March 2023; (v) ESMS updates is under preparation and will be submitted to ADB by 31 March 2023; (vi) EMP and ESMS implementation training are being implemented.

Table 9: Implementation progress of environmental measures in the MOU of Loan Review Mission

| Actions agreed | Responsible Unit | Completion Date | Completion status |
|---|-----------------------|-----------------|---|
| Submission of revised fourth semi-annual EMR | PMO, external monitor | 30-Aug-22 | Completed on 2-Sept-22 |
| Submission of fifth semi-annual EMR covering 1 July to 30 December 2022 | PMO, external monitor | 30-Jan-23 | Refer to this Report |
| Draft DEIA for project scope change | PMO, DEIA institute | i | Completed in February 2023 |
| IEE addendum and updated EMP preparation | PMO, LIEC | | To be completed by 31March 2023 |
| ESMS updates | PMO, HTIC | | To be completed by 31March 2023 |
| EMP and ESMS | PMO, HTIC, LIEC | | During whole project implementation period, |

| Actions agreed | Responsible Unit | Completion Date | Completion status |
|-------------------------|------------------|-----------------|---|
| implementation training | | | especially when new contractors/CSCs, GIF applicants are contracted |

I. Reporting

72. Table 10 summarizes the project environmental safeguard reporting requirements and implementation status during the reporting period, including: i) progress reports submitted by construction supervision companies to implementing agencies; (ii) external monitoring reports submitted by environmental monitoring agencies to implementing agencies and HPMO; and (iii) environmental monitoring progress reports submitted by PMOs to ADB.

Table 10: Environmental reporting requirements and status of implementation during the reporting period

| Report | From | To | Reporting frequency | Implementation status |
|--|---|----------|---------------------|--|
| Internal progress reports | Construction Supervision Company | IAs | Monthly | Completed |
| Implementation report of ESMS | HTIC | EA, HPMO | Half a year | Completed in January, 2022 |
| External monitoring reports | Environmental monitoring agency | EA, HPMO | Half a year | Monitoring activities were carried out in the second half of 2022 and reports were issued. (See Appendix 2). |
| Compliance monitoring and EMP progress reports | Huangshan PMO/ Loan Implementation Environmental Specialist | ADB | Half a year | Refer to this semi-annual progress report on environmental monitoring |

73. **Conclusions and next steps.** The reporting system for the environmental management plan is being implemented as required, and the next semi-annual report on environmental monitoring will report on the implementation for the period from 1 January 2023 to 30 June 2023.

IV. LESSONS LEARNED

74. Lessons learned during reporting period include: it usually takes a long time (at least six months) after the completion of field construction for the final settlement and transfer of capital ownership. During this period, some equipment that needs continuous O&M may lack of maintenance and under substandard O&M due to delayed transfer and insufficient capacity of township that receive the assets. In view of this, the district and county governments and the PMO will provide more support for O&M in the future to solve the problem. For example, the total phosphorus of effluent of WWTS in Zhongze Village, Yiqi township, Tunxi District, failed to comply with the standard limits during trial operation in the first half of 2022 due to the lack of maintenance caused by delayed handover after the completion of the project. In the second half of 2022, Tunxi District has recruited a third party company to take charge of the operation of the WWTS in Zhongze Village and Wainantang Village. At present, water quality of effluent of WWTS has complied with the standard requirements. In view of this, the PMOs has put the work to solve the problem on the agenda and will provide more support in the subsequent transfer of asset and equipment O&M.

V. NEXT STEPS

75. Based on the findings of this EMR, next steps are required are listed below:
- Continue to implement projects in accordance with EIA/EMP requirements during the whole project implementation;
 - By March 2023, complete updating domestic EIA and EMP covering Project adjustments as discussed during the August 2022 ADB mission;
 - By March 2023, carry out the required public consultation during preparation of the updated EIA/EMP;
 - Carry out information disclosure and dissemination during preparation of DEIA, and provide construction site through environment information boards;
 - The HTIC will provide training to stakeholders, especially the staff of the implementing agency and the staff of sub-projects on how to apply ESMS steps for screening, identification and post-investment management of sub-projects once the HTIC signed contract with the sub-project IA.
 - Update ESMS to address ADB comments and recommendations. This includes preparation of the subproject / activity specific REA / worksheets for any new type of subprojects intending to utilize the GIF fund, e.g., Huangshan Mijing Tourism subproject.
 - Remind the EMA to strictly follow relevant technical specifications when carrying out environmental monitoring.
 - Submit IEE addendum and update EMP before 31 March 2023
 - Submit next EMR covering the period of January 2023 to June 2023 by 31 July 2023.

APPENDIX 1 PHOTOS OF ON-SITE CONSTRUCTION ACTIVITIES



Works-SX-6 Water supply pipeline is being installed in Xikou Township, She County



Works-SX-6 Pavement excavation is being conducted



Works-QM-1 Cement stabilized is being paved in Zhongxinnan Road, Qimen County



Works-QM-2 The pavement of flagstone road installed



Works-XN-7 Pipes installed and road restoration is being conducted



Works-SX-7 Excavation of pipeline trenches is being conducted



Site boundaries and water sprinklers have been installed in urban construction area



The WWTS have been operated and managed by a third-party professional company



Workers' Certificates for Special Operations



Safety training records for workers

在建项目开（复）工上岗人员每日测温记录

项目名称: Works-SX-2: 歙县城区南河湾管网完善提升工程

记录人: 王小明

| 序号 | 姓名 | 手机号码 | 体温 | 有无其他不适症状 |
|----|----------|-------------|------|----------|
| 1 | 业主代表 王小明 | 1339510771 | 36.8 | 无 |
| 2 | 监理 赵国华 | 18755911960 | 36.5 | 无 |
| 3 | 监理 金长虹 | 1537597845 | 36.4 | 无 |
| 4 | 项目经理 马博如 | 13034391366 | 36.8 | 无 |
| 5 | 技术负责人 张雷 | 15222789379 | 36.7 | 无 |
| 6 | 施工员 曹磊 | 15385411180 | 36.5 | 无 |
| 7 | 质量员 李皓 | 13601180584 | 36.2 | 无 |
| 8 | 安全员 田元丰 | 13905659536 | 36.5 | 无 |
| 9 | 资料员 王春燕 | 18155902839 | 36.6 | 无 |
| 10 | 材料员 任蕊 | 18755912788 | 36.3 | 无 |
| 11 | 测量员 何翼远 | 18714957547 | 36.4 | 无 |
| 12 | 技术负责人 张雷 | 13685596289 | 36.6 | 无 |
| 13 | 施工员 曹磊 | 18755997335 | 36.6 | 无 |
| 14 | 材料员 洪桂红 | 18152909628 | 36.7 | 无 |
| 15 | 机械工 胡能华 | 13396509599 | 36.2 | 无 |
| 16 | 机械工 郭志超 | 18155902817 | 36.1 | 无 |
| 17 | 工人 吴顺林 | 18214727322 | 36.5 | 无 |
| 18 | 工人 王秀叶 | 18155902826 | 36.8 | 无 |
| 19 | 工人 程小宝 | 18075221686 | 36.9 | 无 |
| 20 | 工人 吴金顺 | 15805590077 | 36.5 | 无 |
| 21 | 工人 吴嘉华 | 15005591100 | 36.4 | 无 |
| 22 | 工人 吴根深 | 18098577488 | 36.2 | 无 |
| 23 | 工人 程成豪 | 15700192827 | 36.4 | 无 |
| 24 | 工人 凌叶平 | 13282251956 | 36.3 | 无 |
| 25 | 工人 陶美兴 | 18714957547 | 36.6 | 无 |
| 26 | 工人 何根柱 | 17755952664 | 36.8 | 无 |
| 27 | 工人 程日阳 | 18755972483 | 36.7 | 无 |
| 28 | 工人 柯伯辉 | 13470965386 | 36.2 | 无 |
| 29 | 工人 纪正凤 | 13855399256 | 36.6 | 无 |

Daily temperature records for workers on duty

危险性较大工程专家论证表

工程名称: Works-xn-1: 休宁县城区污水管网完善提升工程 (1)

施工总承包单位: 安徽信达建筑安装有限公司

专业承包单位: 安徽信达建筑安装有限公司

危险性较大分部分项工程名称: 管道施工及有害气体监测

专家一览表

| 姓名 | 工作单位 | 职务 | 职称 | 专业 |
|-----|--------------|-------|-------|----|
| 王小明 | 安徽信达建筑安装有限公司 | 项目经理 | 高级工程师 | 工程 |
| 张雷 | 安徽信达建筑安装有限公司 | 技术负责人 | 高级工程师 | 工程 |
| 曹磊 | 安徽信达建筑安装有限公司 | 施工员 | 工程师 | 工程 |
| 李皓 | 安徽信达建筑安装有限公司 | 质量员 | 工程师 | 工程 |
| 田元丰 | 安徽信达建筑安装有限公司 | 安全员 | 工程师 | 工程 |
| 王春燕 | 安徽信达建筑安装有限公司 | 资料员 | 工程师 | 工程 |
| 任蕊 | 安徽信达建筑安装有限公司 | 材料员 | 工程师 | 工程 |
| 何翼远 | 安徽信达建筑安装有限公司 | 测量员 | 工程师 | 工程 |
| 张雷 | 安徽信达建筑安装有限公司 | 技术负责人 | 高级工程师 | 工程 |
| 曹磊 | 安徽信达建筑安装有限公司 | 施工员 | 工程师 | 工程 |
| 洪桂红 | 安徽信达建筑安装有限公司 | 材料员 | 工程师 | 工程 |
| 胡能华 | 安徽信达建筑安装有限公司 | 机械工 | 工程师 | 工程 |
| 郭志超 | 安徽信达建筑安装有限公司 | 机械工 | 工程师 | 工程 |
| 吴顺林 | 安徽信达建筑安装有限公司 | 工人 | 工程师 | 工程 |
| 王秀叶 | 安徽信达建筑安装有限公司 | 工人 | 工程师 | 工程 |
| 程小宝 | 安徽信达建筑安装有限公司 | 工人 | 工程师 | 工程 |
| 吴金顺 | 安徽信达建筑安装有限公司 | 工人 | 工程师 | 工程 |
| 吴嘉华 | 安徽信达建筑安装有限公司 | 工人 | 工程师 | 工程 |
| 吴根深 | 安徽信达建筑安装有限公司 | 工人 | 工程师 | 工程 |
| 程成豪 | 安徽信达建筑安装有限公司 | 工人 | 工程师 | 工程 |
| 凌叶平 | 安徽信达建筑安装有限公司 | 工人 | 工程师 | 工程 |
| 陶美兴 | 安徽信达建筑安装有限公司 | 工人 | 工程师 | 工程 |
| 何根柱 | 安徽信达建筑安装有限公司 | 工人 | 工程师 | 工程 |
| 程日阳 | 安徽信达建筑安装有限公司 | 工人 | 工程师 | 工程 |
| 柯伯辉 | 安徽信达建筑安装有限公司 | 工人 | 工程师 | 工程 |
| 纪正凤 | 安徽信达建筑安装有限公司 | 工人 | 工程师 | 工程 |

专家论证意见: 该工程属于危险性较大的分部分项工程, 施工过程中应严格按照专项施工方案进行施工, 加强现场安全管理, 确保施工安全。

专家签名: 王小明, 张雷, 曹磊, 李皓, 田元丰, 王春燕, 任蕊, 何翼远, 张雷, 曹磊, 洪桂红, 胡能华, 郭志超, 吴顺林, 王秀叶, 程小宝, 吴金顺, 吴嘉华, 吴根深, 程成豪, 凌叶平, 陶美兴, 何根柱, 程日阳, 柯伯辉, 纪正凤

项目经理部: 安徽信达建筑安装有限公司

监理单位: 安徽信达建筑安装有限公司

建设单位: 安徽信达建筑安装有限公司

日期: 2022年8月17日

Evaluation records of high-risk sub-project by experts team

APPENDIX 2 EXTERNAL ENVIRONMENTAL MONITORING REPORT



Xinkou Township,
Xiuning County

安环检（2022）第 2095 号

检测报告

Test Report

项目名称：亚行贷款安徽黄山新安江流域生态保护
与绿色发展项目（休宁县溪口镇）

委托单位：上海伊世特科技管理有限公司

报告日期：2022 年 11 月 22 日

黄山安琪尔环境检测有限公司
Huangshan AnQier Environmental Detection CO,LTD



说 明

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八、除客户特别申明并支付档案管理费，本次检测的所有记录档案保存期限为六年。

九、除客户特别申明并支付样品管理费，所有样品超过标准规定的时效期均不再做留样。

检测机构地址：黄山市屯溪区社屋前路 30 号商业楼 101 室 3 楼

电话：0559-2531668

传真：0559-2531668

邮政编码：245000

黄山安琪尔环境检测有限公司检测报告

编号：CW27-04/A3

安环检（2022）第 2095 号

共 4 页 第 1 页

表 1-1 废气采样概况和分析方法

| | | | | |
|--------|--|----------------------------|--------------|------------------------|
| 委托单位 | 上海伊世特科技管理有限公司 | | | |
| 联系人及电话 | 李华 13818855792 | □送样/☑采样日期 | 2022.11.14 | |
| 样品类别 | 气 | 接样日期 | 2022.11.14 | |
| 分析日期 | 2022.11.14-2022.11.16 | 报告日期 | 2022.11.22 | |
| 检测项目 | 检测标准（方法）及编号（含年号） | 仪器设备名称、型号/规格、编号 | 仪器设备检定/校准有效期 | 方法检测限 |
| 气象参数 | / | 便携式风速风向仪 JY-FS-04（2018034） | 2023.01.05 | / |
| | | 便携式风速风向仪 JY-FS-04（2020072） | 2023.01.05 | |
| 颗粒物 | 环境空气 总悬浮颗粒物的测定重量法 GB/T 15432-1995 及修改单 | 万分之一天平 AUW220（2018014） | 2023.01.05 | 0.001mg/m ³ |

表 1-2 无组织废气检测结果

单位：mg/m³

| 采样点位 | 采样起止时间 | 检测项目 |
|-------------------|-------------|-------|
| | | 颗粒物 |
| 休宁县溪口镇熊家施工段 1#上风向 | 11:33-12:33 | 0.233 |
| 休宁县溪口镇熊家施工段 2#下风向 | 11:33-12:33 | 0.317 |
| 休宁县溪口镇熊家施工段 3#敏感点 | 11:33-12:33 | 0.367 |

表 1-3 无组织废气检测采样天气条件

| 采样起止时间 | 天气 | 风向 | 风速（m/s） | 气温（℃） | 气压（Kpa） |
|-------------|----|----|---------|-------|---------|
| 11:33-12:33 | 阴 | 北风 | 1.7 | 14 | 100.6 |

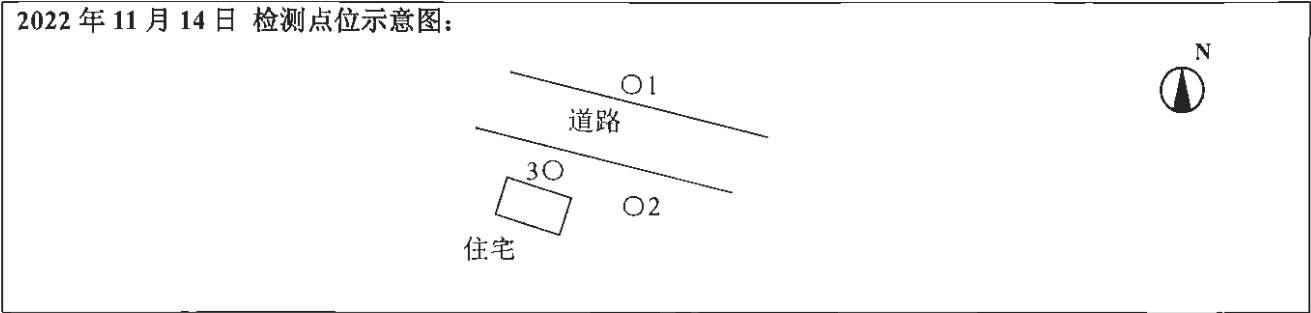
黄山安琪尔环境检测有限公司检测报告

编号: CW27-04/A3

安环检(2022)第 2095 号

共 4 页 第 2 页

表 1-4 无组织废气检测点位图



废气质控信息

表 1-5 废气精密度控制情况统计表

| 项目\内容 | 样品个数(个) | 全程序空白(个) | 实验室平行数(个) | 合格数(个) | 合格率(%) |
|-------|---------|----------|-----------|--------|--------|
| 颗粒物 | 3 | 0 | 0 | / | / |

表 1-6 废气准确度控制情况统计表

| 项目\内容 | 实验室加标数(个) | 质控样数(个) | 合格数(个) | 合格率(%) |
|-------|-----------|---------|--------|--------|
| 颗粒物 | 0 | 1 | 1 | 100 |

表 2-1 噪声检测概况和分析方法

| | | | | |
|--------|-------------------------------|----------------------------|-----------------------|-------|
| 委托单位 | 上海伊世特科技管理有限公司 | | | |
| 联系人及电话 | 李华 13818855792 | □送样/☑采样日期 | 2022.11.14-2022.11.15 | |
| 样品类别 | 噪声 | 接样日期 | 2022.11.14-2022.11.15 | |
| 检测地点 | 休宁县溪口镇江潭村熊家 | 报告日期 | 2022.11.22 | |
| 检测项目 | 检测标准(方法)及编号(含年号) | 仪器设备名称、型号/规格、编号 | 仪器设备检定/校准有效期 | 方法检测限 |
| 气象参数 | / | 便携式风速风向仪 JY-FS-04(2018034) | 2023.01.05 | / |
| 厂界噪声 | 施工噪声排放标准 GB 12523-2011 | 噪声仪 AWA6228+ (2020059) | 2023.08.08 | / |
| | 环境噪声监测技术规范噪声测量值修正 HJ 706-2014 | | | |

黄山安琪尔环境检测有限公司检测报告

编号: CW27-04/A3

安环检(2022)第2095号

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表 2-2 噪声检测结果

| 类别：噪声 | | | | |
|------------|-------------------|-------------|--------|------|
| 检测时间 | 检测点位 | 检测结果 dB(A) | | |
| | | 起止时间 | 昼间 Leq | 主要声源 |
| 2022.11.14 | 江潭村熊家施工路段场界外 1m 处 | 10:50-11:10 | 59.7 | 施工噪声 |
| | 江潭村熊家最近敏感点门前 1m 处 | 11:15-11:25 | 56.2 | 施工噪声 |
| 2022.11.15 | 江潭村熊家施工路段场界外 1m 处 | 13:16-13:36 | 65.7 | 施工噪声 |
| | 江潭村熊家最近敏感点门前 1m 处 | 13:40-13:50 | 56.3 | 施工噪声 |

检测点位示意图:



| | |
|-----|--|
| 备注: | |
|-----|--|

1、检测当天气象参数:

日期：2022.11.14;

天气：阴；

风向：北风；

风速: 1.7m/s:

2、检测当天气象参数:

日期：2022.11.15:

天气：阴：

风向：北风；

风速: 1.8m/s:

黄山安琪尔环境检测有限公司检测报告

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表 2-3 声级校准器校准

| 仪器名称 | 仪器型号/仪器编号 | 仪器设备检定/校准有效期 | 单位 | 标准值 | 校准日期 | 时间 | 仪器显示 | 示值误差 | 是否合格 |
|-------|-----------------------|--------------|-------|----------|------------|-------|------|------|------|
| 声级校准器 | AWA6021A (2020057) | 2023.08.09 | dB(A) | 94.0±0.5 | 2022.11.14 | 08:15 | 94.0 | 0.0 | 合格 |
| | | | | | | 23:57 | 94.1 | +0.1 | 合格 |
| 声级校准器 | AWA6021A (2020057) | 2023.08.09 | dB(A) | 94.0±0.5 | 2022.11.15 | 08:38 | 93.9 | -0.1 | 合格 |
| | | | | | | 19:01 | 93.9 | -0.1 | 合格 |

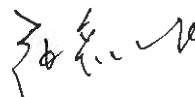
****报告结束****

编制: 171128

审核:



签发:



签发日期:

2022/11/22



Pump station in Tunxi District



安环检（2022）第 2105 号

检测报告

Test Report

项目名称： 亚行贷款安徽黄山新安江流域生态
保护与绿色发展项目（奕棋镇泵站）

委托单位： 上海伊世特科技管理有限公司

报告日期： 2022 年 11 月 17 日



黄山安琪尔环境检测有限公司
Huangshan AnQier Environmental Detection CO.,LTD



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一、报告及复印件必须加盖“CMA”印章和检测报告专用章，否则无效。任何对于检测报告的涂改、增删、骑缝章不完整及无批准人签字均视作无效。

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四、本检测报告仅对当次检测有效，送检样品仅对来样的结果负责，不对样品来源负责。无法复现的样品，不受理申诉。

五、本单位保证工作的客观公正性、对委托单位的商业信息、技术文件等商业秘密进行保密义务。

六、本报告打印的检测员姓名与对应的检测原始记录表格中检测员签署姓名不一致的无效。

七、若委托单位对本次检测报告有异议，可在收到报告之日起十五日内，书面向我公司提出复检或仲裁申请，逾期不予受理。

八、除客户特别申明并支付档案管理费，本次检测的所有记录档案保存期限为六年。

九、除客户特别申明并支付样品管理费，所有样品超过标准规定的时效期均不再做留样。

检测机构地址：黄山市屯溪区社屋前路 30 号商业楼 101 室 3 楼

电话：0559-2531668

传真：0559-2531668

邮政编码：245000

黄山安琪尔环境检测有限公司检测报告

编号：CW27-04/A3

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表 1-1 噪声检测概况和分析方法

| | | | | |
|--------|-----------------------------------|------------------------------|--------------|-------|
| 委托单位 | 上海伊世特科技管理有限公司 | | | |
| 联系人及电话 | 李华 13818855792 | 采样日期 | 2022.11.14 | |
| 样品类别 | 噪声 | 分析日期 | 2022.11.14 | |
| 检测地点 | 黄山市屯溪区奕棋镇 | 报告日期 | 2022.11.17 | |
| 检测项目 | 检测标准（方法）及编号（含年号） | 仪器设备名称、型号/规格、编号 | 仪器设备检定/校准有效期 | 方法检测限 |
| 气象参数 | / | 风速风向仪 ZH-8232（2022115） | 2023.06.05 | / |
| 厂界噪声 | 工业企业厂界环境噪声排放标准 GB 12348-2008 | 噪声仪 AWA6228+ （2021081） | 2023.10.11 | |
| | 环境噪声监测技术规范噪声测量值 修正 HJ 706-2014 | | | |

表 1-2 噪声检测结果

| | | | | | | |
|------------------|-------------|--------|------|--|--------|------|
| 类别：噪声 | | | | | | |
| 检测点位 | 检测结果 dB(A) | | | | | |
| | 起止时间 | 昼间 Leq | 主要声源 | 起止时间 | 夜间 Leq | 主要声源 |
| 泵站西侧厂界外 1m 处 | 15:25-15:26 | 47.6 | 生产 | 22:01-22:02 | 43.3 | 生产 |
| 泵站对面居民敏感点门前 1m 处 | 15:27-15:28 | 47.2 | 生产 | 22:03-22:04 | 44.7 | 生产 |
| 检测点位示意图： | | | | 备注： 1、检测当天气象参数： 日期：2022.11.14； 天气：阴； 风向：东南风； 风速：1.7m/s； | | |
| | | | | | | |

黄山安琪尔环境检测有限公司检测报告

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表 1-3 声级校准器校准

| 仪器名称 | 仪器型号/仪器编号 | 仪器设备检定/校准有效期 | 单位 | 标准值 | 校准日期 | 时间 | 仪器显示 | 示值误差 | 是否合格 |
|-------|----------------------|--------------|-------|----------|------------|-------|------|------|------|
| 声级校准器 | HS6020A (2018010) | 2022.12.12 | dB(A) | 94.0±0.5 | 2022.11.14 | 12:35 | 93.9 | -0.1 | 合格 |
| | | | | | | 23:34 | 93.9 | -0.1 | 合格 |

****报告结束****

编制: 141128

审核: [Signature]

签发: [Signature]

签发日期: 2022.11.14





安环检（2022）第 2106 号

检测报告

Test Report



项目名称： 亚行贷款安徽黄山新安江流域生态
保护与绿色发展项目（奕棋镇污水处理站）

委托单位： 上海伊世特科技管理有限公司

报告日期： 2022 年 11 月 17 日

黄山安琪尔环境检测有限公司
Huangshan AnQier Environmental Detection CO,LTD



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三、当参数测定值小于方法检出限或最低检出浓度时，在检验检测报告中记为 ND，水记为 L，土壤记为<检出限。

四、本检测报告仅对当次检测有效，送检样品仅对来样的结果负责，不对样品来源负责。无法复现的样品，不受理申诉。

五、本单位保证工作的客观公正性、对委托单位的商业信息、技术文件等商业秘密进行保密义务。

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九、除客户特别申明并支付样品管理费，所有样品超过标准规定的时效期均不再做留样。

检测机构地址：黄山市屯溪区社屋前路 30 号商业楼 101 室 3 楼

电话：0559-2531668

传真：0559-2531668

邮政编码：245000

黄山安琪尔环境检测有限公司检测报告

编号: CW27-04/A3

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表 1-1 水质采样概况和分析方法

| | | | | |
|--------|-----------------------------------|---------------------------------|--------------|-----------|
| 委托单位 | 上海伊世特科技管理有限公司 | | | |
| 联系人及电话 | 李华 13818855792 | □送样/☑采样日期 | 2022.11.14 | |
| 样品类别 | 水 | 接样日期 | 2022.11.14 | |
| 分析日期 | 2022.11.14-2022.11.15 | 报告日期 | 2022.11.17 | |
| 检测项目 | 检测标准(方法)及编号(含年号) | 仪器设备名称、型号/规格、编号 | 仪器设备检定/校准有效期 | 方法检测限 |
| pH 值 | 水质 pH 值的测定 电极法 HJ1147-2020 | 便携式 pH 计 PHBJ-260F (22) | 2023.01.05 | / |
| 悬浮物 | 水质 悬浮物的测定 重量法 GB 11901-1989 | 万分之一天平 AUW220(2018014) | 2023.01.05 | / |
| 化学需氧量 | 水质 化学需氧量的测定 重铬酸盐法 HJ 828-2017 | 滴定管 50mL | / | 4mg/L |
| 氨氮 | 水质 氨氮的测定 纳氏试剂分光光度法 HJ 535-2009 | 紫外可见分光光度计 UVmini-1280 (2018025) | 2023.01.05 | 0.025mg/L |
| 总磷 | 水质 总磷的测定 钼酸铵分光光度法 GB/T 11893-1989 | 紫外可见分光光度计 UVmini-1280 (2018025) | 2023.01.05 | 0.01mg/L |

表 1-2 水质检测结果

| 采样点位 | 样品状态及描述 | 检测项目 | | 检测结果 | 单位 |
|------|----------|-------|----|-------------|------|
| | | | | 采样起止时间 | |
| | | | | 15:50-15:55 | |
| 进水口 | 黄、浑浊、有异味 | pH 值 | 水温 | 12.9 | ℃ |
| | | | 浓度 | 7.8 | 无量纲 |
| | | 悬浮物 | | 35 | mg/L |
| | | 化学需氧量 | | 15 | mg/L |
| | | 氨氮 | | 56.3 | mg/L |
| | | 总磷 | | 7.72 | mg/L |

黄山安琪尔环境检测有限公司检测报告

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表 1-2 水质检测结果

| 采样点位 | 样品状态及描述 | 检测项目 | | 检测结果 | | 单位 |
|------|-----------|-------|----|--|------|------|
| | | | | 采样起止时间 | | |
| | | | | 15:44-15:48 | | |
| 出水口 | 无色、透明、无异味 | pH 值 | 水温 | 12.7 | / | ℃ |
| | | | 浓度 | 7.3 | 6-9 | 无量纲 |
| | | 悬浮物 | | 11 | ≤10 | mg/L |
| | | 化学需氧量 | | 8 | ≤50 | mg/L |
| | | 氨氮 | | 0.060 | ≤5 | mg/L |
| | | 总磷 | | 1.15 | ≤0.5 | mg/L |
| | | 执行标准 | | 《城镇污水处理厂污染物排放标准》 (GB 18918-2002) 表 1 中一级 A 标准 | | |

水质质控信息

表 1-3 水样精密度控制情况统计表

| 项目 \ 内容 | 样品个数 (个) | 密码平行数 (个) | 实验室平行数 (个) | 合格数 (个) | 合格率 (%) |
|---------|----------|-----------|------------|---------|---------|
| pH 值 | 2 | 0 | 0 | / | / |
| 悬浮物 | 2 | 0 | 0 | / | / |
| 化学需氧量 | 2 | 0 | 2 | 2 | 100 |
| 氨氮 | 2 | 0 | 4 | 4 | 100 |
| 总磷 | 2 | 0 | 2 | 2 | 100 |

黄山安琪尔环境检测有限公司检测报告

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表 1-4 水样准确度控制情况统计表

| 项目 | 内容 | 实验室加标数（个） | 质控样数（个） | 合格数（个） | 合格率（%） |
|-------|----|-----------|---------|--------|--------|
| pH 值 | | 0 | 1 | 1 | 100 |
| 悬浮物 | | 0 | 3 | 3 | 100 |
| 化学需氧量 | | 0 | 4 | 4 | 100 |
| 氨氮 | | 4 | 0 | 4 | 100 |
| 总磷 | | 4 | 0 | 4 | 100 |

表 1-5 pH 计校准表

| 仪器名称 | 仪器型号 | 仪器编号 | 单位 | 校准日期 | 标准缓冲液理论值 | 仪器显示 | 示值误差 | 允许误差 | 是否合格 |
|----------|-----------|---------|-----|------------|----------|------|-------|-------|------|
| 便携式 pH 计 | PHBJ-260F | 2022113 | 无量纲 | 2022.11.14 | 4.00 | 4.00 | 0.00 | ±0.05 | 合格 |
| | | | | | 6.92 | 6.90 | -0.02 | ±0.05 | 合格 |

表 2-1 废气采样概况和分析方法

| | | | | | |
|--------|---|--|---|--------------|------------------------|
| 委托单位 | 上海伊世特科技管理有限公司 | | | | |
| 联系人及电话 | 李华 13818855792 | | <input type="checkbox"/> 送样/ <input checked="" type="checkbox"/> 采样日期 | | 2022.11.14 |
| 样品类别 | 气 | | 接样日期 | | 2022.11.14 |
| 分析日期 | 2022.11.14-2022.11.15 | | 报告日期 | | 2022.11.17 |
| 检测项目 | 检测标准（方法）及编号（含年号） | | 仪器设备名称、型号/规格、编号 | 仪器设备检定/校准有效期 | 方法检测限 |
| 气象参数 | / | | 便携式风速风向仪 JY-FS-04（2018034） | 2023.01.05 | / |
| 硫化氢 | 亚甲基蓝分光光度法《空气和废气监测分析方法》（第四版）国家环境保护总局（2003 年） | | 紫外可见分光光度 UVmini-1280（2018025） | 2023.01.05 | 0.001mg/m ³ |
| 氨 | 环境空气和废气 氨的测定 纳氏试剂分光光度法 HJ533-2009 | | 紫外可见分光光度计 UVmini-1280（2018025） | 2023.01.05 | 0.01mg/m ³ |

表 2-2 无组织废气检测结果

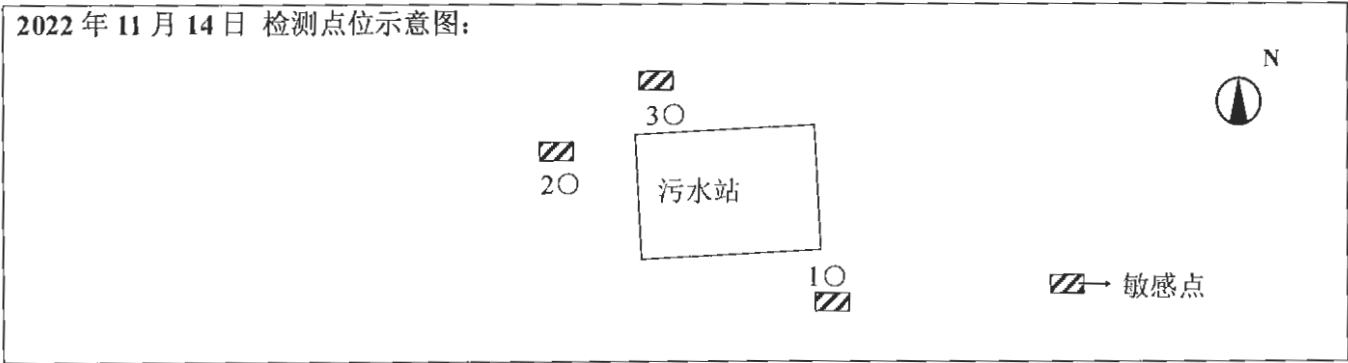
单位：mg/m³

| 采样点位 | 采样起止时间 | 检测项目 | |
|------------|-------------|-------|------|
| | | 硫化氢 | 氨 |
| 1#上风向最近敏感点 | 15:40-16:40 | 0.006 | ND |
| 2#下风向最近敏感点 | 15:40-16:40 | 0.004 | 0.02 |
| 3#下风向最近敏感点 | 15:40-16:40 | 0.005 | ND |

表 2-3 无组织废气检测采样天气条件

| 采样起止时间 | 天气 | 风向 | 风速（m/s） | 气温（℃） | 气压（Kpa） |
|-------------|----|----|---------|-------|---------|
| 15:40-16:40 | 阴 | 东南 | 1.7 | 11 | 98.8 |

表 2-4 无组织废气检测点位图



废气质控信息

表 2-5 废气精密度控制情况统计表

| 项目 | 内容 | 样品个数(个) | 全程序空白(个) | 实验室平行数(个) | 合格数(个) | 合格率(%) |
|-----|----|---------|----------|-----------|--------|--------|
| 硫化氢 | | 3 | 1 | 0 | 1 | 100 |
| 氨 | | 3 | 1 | 0 | 1 | 100 |

黄山安琪尔环境检测有限公司检测报告

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表 2-6 废气准确度控制情况统计表

| 项目 \ 内容 | 实验室加标数(个) | 质控样数(个) | 合格数(个) | 合格率(%) |
|---------|-----------|---------|--------|--------|
| 硫化氢 | 2 | 0 | 2 | 100 |
| 氨 | 2 | 0 | 2 | 100 |

表 2-7 全程序空白样分析值表

单位: mg/m³

| 项目 \ 内容 | 全程序空白样分析值 |
|---------|-----------|
| 硫化氢 | ND |
| 氨 | ND |

****报告结束****

编制: 程旭沛

审核: 李心

签发: 李心

签发日期: 2022.11.17





Pump station in
Huizhou District

安环检（2022）第 2107 号

检测报告

Test Report

项目名称:

亚行贷款安徽黄山新安江流域生态保
护与绿色发展项目（徽州区杨村泵站）

委托单位:

上海伊世特科技管理有限公司

报告日期:

2022 年 11 月 18 日



黄山安琪尔环境检测有限公司
Huangshan AnQier Environmental Detection CO,LTD



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三、当参数测定值小于方法检出限或最低检出浓度时，在检验检测报告中气记为 ND，水记为 L，土壤记为<检出限。

四、本检测报告仅对当次检测有效，送检样品仅对来样的结果负责，不对样品来源负责。无法复现的样品，不受理申诉。

五、本单位保证工作的客观公正性、对委托单位的商业信息、技术文件等商业秘密进行保密义务。

六、本报告打印的检测员姓名与对应的检测原始记录表格中检测员签署姓名不一致的无效。

七、若委托单位对本次检测报告有异议，可在收到报告之日起十五日内，书面向我公司提出复检或仲裁申请，逾期不予受理。

八、除客户特别申明并支付档案管理费，本次检测的所有记录档案保存期限为六年。

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检测机构地址：黄山市屯溪区社屋前路 30 号商业楼 101 室 3 楼

电话：0559-2531668

传真：0559-2531668

邮政编码：245000

黄山安琪尔环境检测有限公司检测报告

编号: CW27-04/A3

安环检(2022)第2107号

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表 1-1 噪声检测概况和分析方法

| | | | | | |
|--------|----------------------------------|--|------------------------------|------------------|---|
| 委托单位 | 上海伊世特科技管理有限公司 | | | | |
| 联系人及电话 | 李华 13818855792 | | 采样日期 | 2022.11.15 | |
| 样品类别 | 噪声 | | 分析日期 | 2022.11.15 | |
| 检测地点 | 徽州区杨村乡山口村 | | 报告日期 | 2022.11.18 | |
| 检测项目 | 检测标准（方法）及编号（含年号） | | 仪器设备名称、型号 /规格、编号 | 仪器设备检定 /校准有效期 | 方法检测限 |
| 气象参数 | / | | 风速风向仪 ZH-8232（2022115） | 2023.06.05 |  |
| 厂界噪声 | 工业企业厂界环境噪声排放标准 GB12348—2008 | | 噪声仪 AWA6228+ （2021081） | 2023.10.11 | |
| | 环境噪声监测技术规范噪声测量 值修正 HJ706-2014 | | | | |

表 1-2 噪声检测结果

| | | | | | | |
|-----------------------|-------------|--------|------|-------------|--------|------|
| 类别: 噪声 | | | | | | |
| 检测点位 | 检测结果 dB(A) | | | | | |
| | 起止时间 | 昼间 Leq | 主要声源 | 起止时间 | 夜间 Leq | 主要声源 |
| 山口村泵站北侧 厂界外 1m 处 | 10:22-10:23 | 46.9 | 生产 | 22:06-22:07 | 43.3 | 生产 |
| 山口村泵站东侧 居民点窗外 1m 处 | 10:26-10:27 | 43.7 | 生产 | 22:01-22:02 | 42.7 | 生产 |

续表 1-2 噪声检测结果


| | |
|---|--|
| 检测点位示意图： | 备注： 1、检测当天气象参数： 日期：2022.11.15； 天气：阴； 风向：西北风； 风速：1.7m/s。 |
|  | |

表 1-3 声级校准器校准

| 仪器名称 | 仪器型号/ 仪器编号 | 仪器设备 检定/校准 有效期 | 单位 | 标准值 | 校准日期 | 时间 | 仪器显示 | 示值 误差 | 是否 合格 |
|-------|-----------------------|----------------------|-------|----------|------------|-------|------|----------|----------|
| 声级校准器 | AWA6021A (2020057) | 2023.08.09 | dB(A) | 94.0±0.5 | 2022.11.15 | 08:30 | 93.9 | -0.1 | 合格 |
| | | | | | | 23:30 | 93.9 | -0.1 | 合格 |

****报告结束****

编制：胡俊

审核：李

签发：李

签发日期：2022.11.15





WWTS in Huizhou District



安环检（2022）第 2108 号

检测报告

Test Report

项目名称： 亚行贷款安徽黄山新安江流域生态
保护与绿色发展项目（徽州区 40t 污水处理站）

委托单位： 上海伊世特科技管理有限公司

报告日期： 2022 年 11 月 22 日



黄山安祺尔环境检测有限公司
Huangshan AnQier Environmental Detection CO,LTD



说 明

一、报告及复印件必须加盖“CMA”印章和检测报告专用章，否则无效。任何对于检测报告的涂改、增删、骑缝章不完整及无批准人签字均视作无效。

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四、本检测报告仅对当次检测有效，送检样品仅对来样的结果负责，不对样品来源负责。无法复现的样品，不受理申诉。

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九、除客户特别申明并支付样品管理费，所有样品超过标准规定的时效期均不再做留样。

检测机构地址：黄山市屯溪区社屋前路 30 号商业楼 101 室 3 楼

电话：0559-2531668

传真：0559-2531668

邮政编码：245000

黄山安琪尔环境检测有限公司检测报告

编号：CW27-04/A3

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表 1-1 水质采样概况和分析方法

| | | | | |
|--------|-----------------------------------|---|--------------|-----------|
| 委托单位 | 上海伊世特科技管理有限公司 | | | |
| 联系人及电话 | 李华 13818855792 | <input type="checkbox"/> 送样/ <input checked="" type="checkbox"/> 采样日期 | 2022.11.15 | |
| 样品类别 | 水 | 接样日期 | 2022.11.15 | |
| 分析日期 | 2022.11.15-2022.11.16 | 报告日期 | 2022.11.22 | |
| 检测项目 | 检测标准（方法）及编号（含年号） | 仪器设备名称、型号/规格、编号 | 仪器设备检定/校准有效期 | 方法检测限 |
| pH 值 | 水质 pH 值的测定 电极法 HJ1147-2020 | 便携式 pH 计 PHBJ-260F (2022113) | 2023.06.05 | / |
| 悬浮物 | 水质 悬浮物的测定 重量法 GB 11901-1989 | 万分之一天平 AUW220(2018014) | 2023.01.05 | / |
| 化学需氧量 | 水质 化学需氧量的测定 重铬酸盐法 HJ 828-2017 | 滴定管 50mL | / | 4mg/L |
| 氨氮 | 水质 氨氮的测定 纳氏试剂分光光度法 HJ 535-2009 | 紫外可见分光光度计 UVmini-1280 (2018025) | 2023.01.05 | 0.025mg/L |
| 总磷 | 水质 总磷的测定 钼酸铵分光光度法 GB/T 11893-1989 | 紫外可见分光光度计 UVmini-1280 (2018025) | 2023.01.05 | 0.01mg/L |

表 1-2 水质检测结果

| 采样点位 | 样品状态及描述 | 检测项目 | | 检测结果 | 单位 |
|------|-----------|-------|----|-------------|------|
| | | | | 采样起止时间 | |
| | | | | 11:05-11:10 | |
| 进水口 | 微黄、浑浊、有异味 | pH 值 | 水温 | 12.4 | ℃ |
| | | | 浓度 | 7.6 | 无量纲 |
| | | 悬浮物 | | 15 | mg/L |
| | | 化学需氧量 | | 13 | mg/L |
| | | 氨氮 | | 0.203 | mg/L |
| | | 总磷 | | 0.82 | mg/L |

黄山安琪尔环境检测有限公司检测报告

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安环检（2022）第 2108 号
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表 1-2 水质检测结果

| 采样点位 | 样品状态及描述 | 检测项目 | | 检测结果 | 单位 |
|------|-----------|-------|----|-------------|------|
| | | | | 采样起止时间 | |
| | | | | 11:00-11:04 | |
| 出水口 | 无色、透明、无异味 | pH 值 | 水温 | 12.3 | ℃ |
| | | | 浓度 | 7.3 | 无量纲 |
| | | 悬浮物 | | 8 | mg/L |
| | | 化学需氧量 | | 8 | mg/L |
| | | 氨氮 | | 0.054 | mg/L |
| | | 总磷 | | 0.48 | mg/L |
| | | | | | |

水质质控信息

表 1-3 水样精密度控制情况统计表

| 项目 \ 内容 | 样品个数（个） | 密码平行数（个） | 实验室平行数（个） | 合格数（个） | 合格率（%） |
|---------|---------|----------|-----------|--------|--------|
| pH 值 | 2 | 0 | 0 | / | / |
| 悬浮物 | 2 | 0 | 0 | / | / |
| 化学需氧量 | 2 | 0 | 2 | 2 | 100 |
| 氨氮 | 2 | 0 | 1 | 1 | 100 |
| 总磷 | 2 | 0 | 1 | 1 | 100 |

黄山安琪尔环境检测有限公司检测报告

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表 1-4 水样准确度控制情况统计表

| 项目 | 内容 | 实验室加标数(个) | 质控样数(个) | 合格数(个) | 合格率(%) |
|-------|----|-----------|---------|--------|--------|
| pH 值 | | 0 | 1 | 1 | 100 |
| 悬浮物 | | 0 | 2 | 2 | 100 |
| 化学需氧量 | | 0 | 4 | 4 | 100 |
| 氨氮 | | 2 | 0 | 2 | 100 |
| 总磷 | | 2 | 0 | 2 | 100 |

表 1-5 pH 计校准表

| 仪器名称 | 仪器型号 | 仪器编号 | 单位 | 校准日期 | 标准缓冲液理论值 | 仪器显示 | 示值误差 | 允许误差 | 是否合格 |
|----------|-----------|---------|-----|------------|----------|------|-------|-------|------|
| 便携式 pH 计 | PHBJ-260F | 2022113 | 无量纲 | 2022.11.15 | 4.00 | 4.00 | 0.00 | ±0.05 | 合格 |
| | | | | | 6.92 | 6.90 | -0.02 | ±0.05 | 合格 |

表 2-1 废气采样概况和分析方法

| | | | | |
|--------|--|---|--------------|------------------------|
| 委托单位 | 上海伊世特科技管理有限公司 | | | |
| 联系人及电话 | 李华 13818855792 | <input type="checkbox"/> 送样/ <input checked="" type="checkbox"/> 采样日期 | | 2022.11.15 |
| 样品类别 | 气 | 接样日期 | | 2022.11.15 |
| 分析日期 | 2022.11.15-2022.11.18 | 报告日期 | | 2022.11.22 |
| 检测项目 | 检测标准(方法)及编号(含年号) | 仪器设备名称、型号/规格、编号 | 仪器设备检定/校准有效期 | 方法检测限 |
| 气象参数 | / | 风速风向仪 ZH-8232 (2022115) | 2023.06.05 | / |
| 硫化氢 | 亚甲基蓝分光光度法《空气和废气监测分析方法》(第四版)国家环境保护总局(2003年) | 紫外可见分光光度 UVmini-1280 (2018025) | 2023.01.05 | 0.001mg/m ³ |
| 氨 | 环境空气和废气 氨的测定 纳氏试剂分光光度法 HJ533-2009 | 紫外可见分光光度计 UVmini-1280 (2018025) | 2023.01.05 | 0.01mg/m ³ |

黄山安琪尔环境检测有限公司检测报告

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表 2-2 无组织废气检测结果

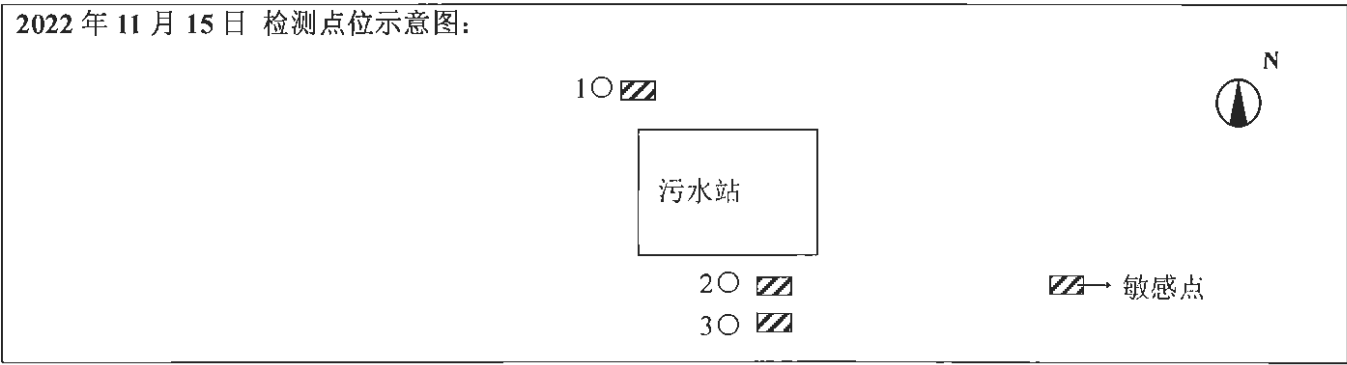
单位：mg/m³

| 采样点位 | 采样起止时间 | 检测项目 | |
|------------|-------------|-------|------|
| | | 硫化氢 | 氨 |
| 1#上风向最近敏感点 | 10:40-11:40 | 0.005 | 0.03 |
| 2#下风向最近敏感点 | 10:40-11:40 | 0.003 | 0.03 |
| 3#下风向最近敏感点 | 10:40-11:40 | 0.004 | 0.02 |

表 2-3 无组织废气检测采样天气条件

| 采样起止时间 | 天气 | 风向 | 风速（m/s） | 气温（℃） | 气压（Kpa） |
|-------------|----|----|---------|-------|---------|
| 10:40-11:40 | 阴 | 西北 | 1.7 | 12 | 98.8 |

表 2-4 无组织废气检测点位图



废气质控信息

表 2-5 废气精密度控制情况统计表

| 项目 \ 内容 | 样品个数(个) | 全程序空白(个) | 实验室平行数(个) | 合格数(个) | 合格率(%) |
|---------|---------|----------|-----------|--------|--------|
| 硫化氢 | 3 | 1 | 0 | 1 | 100 |
| 氨 | 3 | 1 | 0 | 1 | 100 |

黄山安琪尔环境检测有限公司检测报告

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表 2-6 废气准确度控制情况统计表

| 项目 \ 内容 | 实验室加标数 (个) | 质控样数 (个) | 合格数 (个) | 合格率 (%) |
|---------|------------|----------|---------|---------|
| 硫化氢 | 2 | 0 | 2 | 100 |
| 氨 | 2 | 0 | 2 | 100 |

表 2-7 全程序空白样分析值表

单位: mg/m³

| 项目 \ 内容 | 全程序空白样分析值 |
|---------|-----------|
| 硫化氢 | ND |
| 氨 | ND |

****报告结束****

2022.11.22

编制: 程旭沛

审核: 李

签发: 程旭沛





Xitou Township,
She County

安环检（2022）第 2109 号

检测报告

Test Report

项目名称： 亚行贷款安徽黄山新安江流域生态
保护与绿色发展项目（歙县溪头镇）

委托单位： 上海伊世特科技管理有限公司

报告日期： 2022 年 11 月 18 日

黄山安琪尔环境检测有限公司
Huangshan AnQier Environmental Detection CO,LTD



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九、除客户特别申明并支付样品管理费，所有样品超过标准规定的时效期均不再做留样。

检测机构地址：黄山市屯溪区社屋前路 30 号商业楼 101 室 3 楼

电话：0559-2531668

传真：0559-2531668

邮政编码：245000

黄山安琪尔环境检测有限公司检测报告

编号: CW27-04/A3

安环检(2022)第2109号

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表 1-1 废气采样概况和分析方法

| | | | | |
|--------|--|---|--------------|------------------------|
| 委托单位 | 上海伊世特科技管理有限公司 | | | |
| 联系人及电话 | 李华 13818855792 | <input type="checkbox"/> 送样/ <input checked="" type="checkbox"/> 采样日期 | 2022.11.15 | |
| 样品类别 | 气 | 接样日期 | 2022.11.15 | |
| 分析日期 | 2022.11.15-2022.11.17 | 报告日期 | 2022.11.18 | |
| 检测项目 | 检测标准(方法)及编号(含年号) | 仪器设备名称、型号/规格、编号 | 仪器设备检定/校准有效期 | 方法检测限 |
| 气象参数 | / | 风速风向仪 ZH-8232 (2022115) | 2023.06.05 | / |
| 颗粒物 | 环境空气 总悬浮颗粒物的测定重量法 GB/T 15432-1995 及修改单 | 万分之一天平 AUW220 (2018014) | 2023.01.05 | 0.001mg/m ³ |

表 1-2 无组织废气检测结果

单位: mg/m³

| 采样点位 | 采样起止时间 | 检测项目 |
|--------------------|-------------|-------|
| | | 颗粒物 |
| 梓坑村至溪头村施工段 1#上风向 | 14:20-15:20 | 0.233 |
| 梓坑村至溪头村施工段 2#下风向 | 14:20-15:20 | 0.317 |
| 梓坑村至溪头村施工段 3#居民敏感点 | 14:20-15:20 | 0.333 |

表 1-3 无组织废气检测采样天气条件

| 采样起止时间 | 天气 | 风向 | 风速 (m/s) | 气温 (℃) | 气压 (Kpa) |
|-------------|----|----|----------|--------|----------|
| 14:20-15:20 | 阴 | 东风 | 1.9 | 11 | 98.8 |



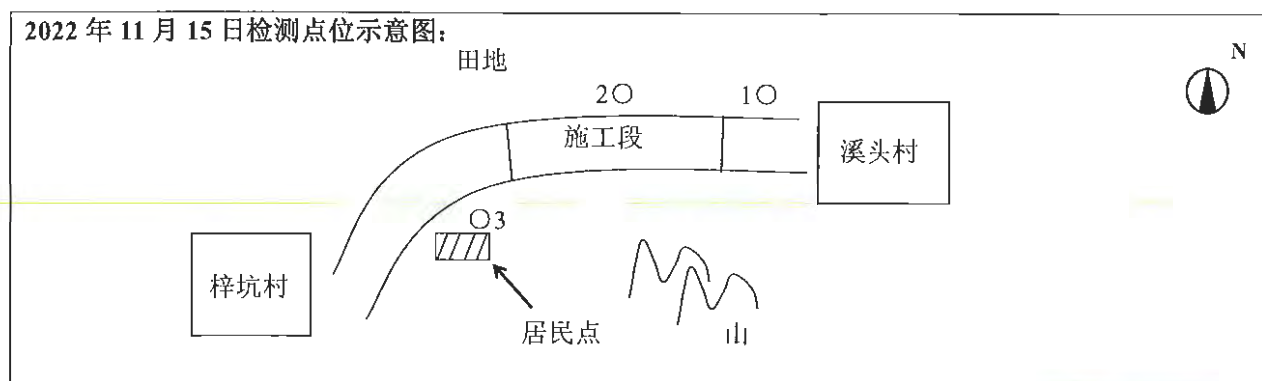
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表 1-4 无组织废气检测点位图



废气质控信息

表 1-5 废气精密度控制情况统计表

| 项目 | 内容 | 样品个数(个) | 全程序空白(个) | 实验室平行数(个) | 合格数(个) | 合格率(%) |
|-----|----|---------|----------|-----------|--------|--------|
| 颗粒物 | | 3 | 0 | 0 | / | / |

表 1-6 废气准确度控制情况统计表

| 项目 | 内容 | 实验室加标数(个) | 质控样数(个) | 合格数(个) | 合格率(%) |
|-----|----|-----------|---------|--------|--------|
| 颗粒物 | | 0 | 2 | 2 | 100 |

表 2-1 噪声检测概况和分析方法

| | | | | |
|--------|----------------------------------|------------------------------|-----------------------|-------|
| 委托单位 | 上海伊世特科技管理有限公司 | | | |
| 联系人及电话 | 李华 13818855792 | 采样日期 | 2022.11.15、2022.11.16 | |
| 样品类别 | 噪声 | 分析日期 | 2022.11.15、2022.11.16 | |
| 检测地点 | 歙县溪头镇梓坑村至溪头村路段 | 报告日期 | 2022.11.18 | |
| 检测项目 | 检测标准(方法)及编号(含年号) | 仪器设备名称、型号/规格、编号 | 仪器设备检定/校准有效期 | 方法检测限 |
| 气象参数 | / | 风速风向仪 ZH-8232 (2022115) | 2023.06.05 | / |
| 施工噪声 | 建筑施工场界环境噪声排放标准 GB 12523-2011 | 噪声仪 AWA6228+ (2021081) | 2023.10.11 | / |
| | 环境噪声监测技术规范噪声测量 值修正 HJ706-2014 | | | |

黄山安琪尔环境检测有限公司检测报告

编号: CW27-04/A3

安环检(2022)第2109号

共3页 第3页

表 2-2 噪声检测结果

| 类别: 噪声 | | | | |
|------------|-----------------------|-------------|--------|------|
| 采样日期 | 检测点位 | 检测结果 dB(A) | | |
| | | 起止时间 | 昼间 Leq | 主要声源 |
| 2022.11.15 | 溪头镇施工路段南侧场界外 1m 处 | 14:38-14:58 | 58.5 | 施工噪声 |
| | 溪头镇施工路段南侧最近敏感点门前 1m 处 | 15:04-15:14 | 58.5 | 施工噪声 |
| 2022.11.16 | 溪头镇施工路段南侧场界外 1m 处 | 10:54-11:14 | 67.4 | 施工噪声 |
| | 溪头镇施工路段南侧最近敏感点门前 1m 处 | 11:19-11:29 | 59.5 | 施工噪声 |

检测点位示意图:



备注:

1、检测当天气象参数:

日期: 2022.11.15;

天气: 阴;

风向: 东风;

风速: 1.9m/s;

2、检测当天气象参数:

日期: 2022.11.16;

天气: 阴;

风向: 东北风;

风速: 1.8m/s;

3、2022.11.15-2022.11.16 检测期间,施工时该路段正常通车,受交通噪声影响;

4、只检测昼间噪声。

表 2-3 声级校准器校准

| 仪器名称 | 仪器型号/仪器编号 | 仪器设备检定/校准有效期 | 单位 | 标准值 | 校准日期 | 时间 | 仪器显示 | 示值误差 | 是否合格 |
|-------|--------------------|--------------|-------|----------|------------|-------|------|------|------|
| 声级校准器 | AWA6021A (2020057) | 2023.08.09 | dB(A) | 94.0±0.5 | 2022.11.15 | 08:30 | 93.9 | -0.1 | 合格 |
| | | | | | | 23:30 | 93.9 | -0.1 | 合格 |
| 声级校准器 | AWA6021A (2020057) | 2023.08.09 | dB(A) | 94.0±0.5 | 2022.11.16 | 08:04 | 93.9 | -0.1 | 合格 |
| | | | | | | 17:19 | 93.9 | -0.1 | 合格 |

****报告结束****

编制: 林敏

审核: 李

签发: 王

签发日期: 2022.11.18





Urban Area in She
County

安环检（2022）第 2110 号

检测报告

Test Report

项目名称： 亚行贷款安徽黄山新安江流域生态保护
与绿色发展项目（歙县县城）
委托单位： 上海伊世特科技管理有限公司
报告日期： 2022 年 11 月 21 日

黄山安琪尔环境检测有限公司
Huangshan AnQier Environmental Detection CO,LTD



说 明

一、报告及复印件必须加盖“CMA”印章和检测报告专用章，否则无效。任何对于检测报告的涂改、增删、骑缝章不完整及无批准人签字均视作无效。

二、未经本机构同意不得复制（全文复制除外）本检测报告，不得利用本检测报告作任何商业性宣传。

三、当参数测定值小于方法检出限或最低检出浓度时，在检验检测报告中记为 ND，水记为 L，土壤记为<检出限。

四、本检测报告仅对当次检测有效，送检样品仅对来样的结果负责，不对样品来源负责。无法复现的样品，不受理申诉。

五、本单位保证工作的客观公正性、对委托单位的商业信息、技术文件等商业秘密进行保密义务。

六、本报告打印的检测员姓名与对应的检测原始记录表格中检测员签署姓名不一致的无效。

七、若委托单位对本次检测报告有异议，可在收到报告之日起十五日内，书面向我公司提出复检或仲裁申请，逾期不予受理。

八、除客户特别申明并支付档案管理费，本次检测的所有记录档案保存期限为六年。

九、除客户特别申明并支付样品管理费，所有样品超过标准规定的时效期均不再做留样。

检测机构地址：黄山市屯溪区社屋前路 30 号商业楼 101 室 3 楼

电话：0559-2531668

传真：0559-2531668

邮政编码：245000

黄山安琪尔环境检测有限公司检测报告

编号: CW27-04/A3

安环检(2022)第2110号

共3页 第1页

表 1-1 废气采样概况和分析方法

| | | | | |
|--------|--|---|--------------|------------------------|
| 委托单位 | 上海伊世特科技管理有限公司 | | | |
| 联系人及电话 | 李华 13818855792 | <input type="checkbox"/> 送样/ <input checked="" type="checkbox"/> 采样日期 | 2022.11.15 | |
| 样品类别 | 气 | 接样日期 | 2022.11.15 | |
| 分析日期 | 2022.11.15-2022.11.17 | 报告日期 | 2022.11.21 | |
| 检测项目 | 检测标准(方法)及编号(含年号) | 仪器设备名称、型号/规格、编号 | 仪器设备检定/校准有效期 | 方法检测限 |
| 气象参数 | / | 风速风向仪 ZH-8232 (20221115) | 2023.06.05 | / |
| 颗粒物 | 环境空气 总悬浮颗粒物的测定重量法 GB/T 15432-1995 及修改单 | 万分之一天平 AUW220 (2018014) | 2023.01.05 | 0.001mg/m ³ |

表 1-2 无组织废气检测结果

单位: mg/m³

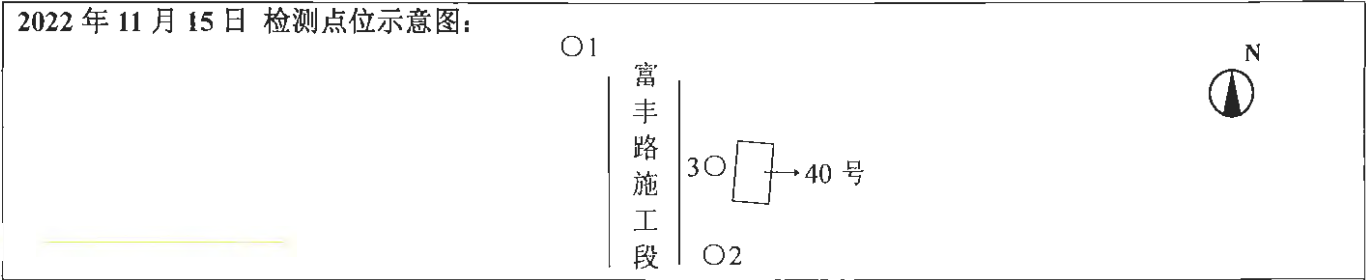
| 采样点位 | 采样起止时间 | 检测项目 |
|----------------|-------------|-------|
| | | 颗粒物 |
| 1#上风向 | 15:50-16:50 | 0.217 |
| 2#下风向 | 15:50-16:50 | 0.367 |
| 3#敏感点(富丰路40号前) | 15:50-16:50 | 0.333 |

表 1-3 无组织废气检测采样天气条件

| 采样起止时间 | 天气 | 风向 | 风速(m/s) | 气温(℃) | 气压(Kpa) |
|-------------|----|----|---------|-------|---------|
| 15:50-16:50 | 阴 | 北风 | 1.9 | 11 | 98.8 |



表 1-4 无组织废气检测点位图



废气质控信息

表 1-5 废气精密度控制情况统计表

| 项目\内容 | 样品个数（个） | 全程序空白（个） | 实验室平行数（个） | 合格数（个） | 合格率（%） |
|-------|---------|----------|-----------|--------|--------|
| 颗粒物 | 3 | 1 | 0 | 1 | 100 |

表 1-6 废气准确度控制情况统计表

| 项目\内容 | 实验室加标数（个） | 质控样数（个） | 合格数（个） | 合格率（%） |
|-------|-----------|---------|--------|--------|
| 颗粒物 | 0 | 2 | 2 | 100 |

表 1-7 全程序空白样分析值表

单位：mg/m³

| 项目\内容 | 全程序空白样分析值 |
|-------|-----------|
| 颗粒物 | ND |

表 2-1 噪声检测概况和分析方法

| | | | | |
|--------|-------------------------------|------------------------|-----------------------|-------|
| 委托单位 | 上海伊世特科技管理有限公司 | | | |
| 联系人及电话 | 李华 13818855792 | □送样/☑采样日期 | 2022.11.15、2022.11.16 | |
| 样品类别 | 噪声 | 接样日期 | 2022.11.15、2022.11.16 | |
| 检测地点 | 歙县县城富丰路 40 号旁 | 报告日期 | 2022.11.21 | |
| 检测项目 | 检测标准（方法）及编号（含年号） | 仪器设备名称、型号/规格、编号 | 仪器设备检定/校准有效期 | 方法检测限 |
| 气象参数 | / | 风速风向仪 ZH-8232（2022115） | 2023.06.05 | / |
| 厂界噪声 | 施工噪声排放标准 GB 12523-2011 | 噪声仪 AWA6228+（2021081） | 2023.10.11 | / |
| | 环境噪声监测技术规范噪声测量值修正 HJ 706-2014 | | | |

表 2-2 噪声检测结果

| 类别: 噪声 | | | | |
|------------|-------------------|--|--------|------------------------|
| 检测时间 | 检测点位 | 检测结果 dB(A) | | |
| | | 起止时间 | 昼间 Leq | 主要声源 |
| 2022.11.15 | 富平路 40 号窗外 1m 处 | 16:05-16:15 | 61.9 | 施工噪声及环境噪声 (周边有车辆通行) |
| | 富平路施工路段东侧场界外 1m 处 | 16:17-16:37 | 65.0 | 施工噪声 |
| 2022.11.16 | 富平路 40 号窗外 1m 处 | 09:35-09:45 | 60.5 | 施工噪声及环境噪声 (周边有车辆通行) |
| | 富平路施工路段东侧场界外 1m 处 | 09:47-10:07 | 62.5 | 施工噪声 |
| 检测点位示意图: | | <p>备注:</p> <p>1、检测当天气象参数: 日期: 2022.11.15; 天气: 阴; 风向: 北风; 风速: 1.9m/s;</p> <p>2、检测当天气象参数: 日期: 2022.11.16; 天气: 阴; 风向: 东北风; 风速: 2.0m/s;</p> <p>3、路段 1 个车道在施工, 1 个车道正常通车。</p> | | |

表 2-3 声级校准器校准

| 仪器名称 | 仪器型号/仪器编号 | 仪器设备检定/校准有效期 | 单位 | 标准值 | 校准日期 | 时间 | 仪器显示 | 示值误差 | 是否合格 |
|-------|-----------------------|--------------|-------|----------|------------|-------|------|------|------|
| 声级校准器 | AWA6021A (2020057) | 2023.08.09 | dB(A) | 94.0±0.5 | 2022.11.15 | 08:30 | 93.9 | -0.1 | 合格 |
| | | | | | | 23:30 | 93.9 | -0.1 | 合格 |
| 声级校准器 | AWA6021A (2020057) | 2023.08.09 | dB(A) | 94.0±0.5 | 2022.11.16 | 08:04 | 93.9 | -0.1 | 合格 |
| | | | | | | 17:19 | 93.9 | -0.1 | 合格 |

****报告结束****

编制: 许明子

审核: 李

签发: 张

签发日期: 2022.11.21





Urban Area in
Xiuning County

安环检（2022）第 2112 号

检测报告

Test Report

项目名称:

亚行贷款安徽黄山新安江流域生态
保护与绿色发展项目（休宁县城）

委托单位:

上海伊世特科技管理有限公司

报告日期:

2022 年 11 月 22 日

黄山安琪尔环境检测有限公司
Huangshan AnQier Environmental Detection CO,LTD



说 明

一、报告及复印件必须加盖“CMA”印章和检测报告专用章，否则无效。任何对于检测报告的涂改、增删、骑缝章不完整及无批准人签字均视作无效。

二、未经本机构同意不得复制（全文复制除外）本检测报告，不得利用本检测报告作任何商业性宣传。

三、当参数测定值小于方法检出限或最低检出浓度时，在检验检测报告中记为 ND，水记为 L，土壤记为<检出限。

四、本检测报告仅对当次检测有效，送检样品仅对来样的结果负责，不对样品来源负责。无法复现的样品，不受理申诉。

五、本单位保证工作的客观公正性、对委托单位的商业信息、技术文件等商业秘密进行保密义务。

六、本报告打印的检测员姓名与对应的检测原始记录表格中检测员签署姓名不一致的无效。

七、若委托单位对本次检测报告有异议，可在收到报告之日起十五日内，书面向我公司提出复检或仲裁申请，逾期不予受理。

八、除客户特别申明并支付档案管理费，本次检测的所有记录档案保存期限为六年。

九、除客户特别申明并支付样品管理费，所有样品超过标准规定的时效期均不再做留样。

检测机构地址：黄山市屯溪区社屋前路 30 号商业楼 101 室 3 楼

电话：0559-2531668

传真：0559-2531668

邮政编码：245000

黄山安琪尔环境检测有限公司检测报告

编号：CW27-04/A3

安环检（2022）第 2112 号

共 4 页 第 1 页

表 1-1 废气采样概况和分析方法

| | | | | |
|--------|--|---|--------------|------------------------|
| 委托单位 | 上海伊世特科技管理有限公司 | | | |
| 联系人及电话 | 李华 13818855792 | <input type="checkbox"/> 送样/ <input checked="" type="checkbox"/> 采样日期 | 2022.11.16 | |
| 样品类别 | 气 | 接样日期 | 2022.11.16 | |
| 分析日期 | 2022.11.16-2022.11.18 | 报告日期 | 2022.11.22 | |
| 检测项目 | 检测标准(方法)及编号(含年号) | 仪器设备名称、型号/规格、编号 | 仪器设备检定/校准有效期 | 方法检测限 |
| 气象参数 | / | 便携式风速风向仪 JY-FS-04 (2020072) | 2023.01.05 | / |
| 颗粒物 | 环境空气 总悬浮颗粒物的测定重量法 GB/T 15432-1995 及修改单 | 万分之一天平 AUW220 (2018014) | 2023.01.05 | 0.001mg/m ³ |

表 1-2 无组织废气检测结果

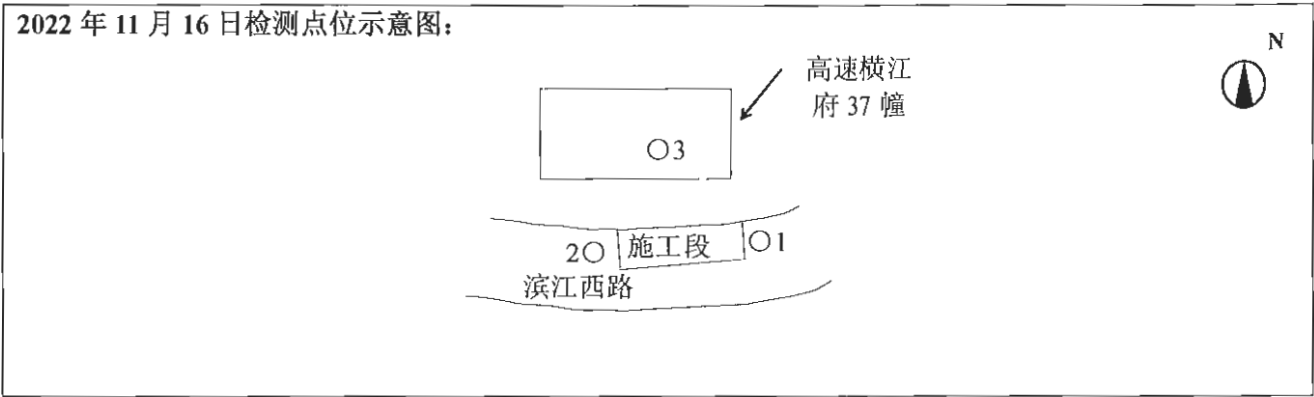
单位：mg/m³

| 采样点位 | 采样起止时间 | 检测项目 |
|--------------------------------------|-------------|-------|
| | | 颗粒物 |
| 休宁县滨江西路路段（高速横江府 37 幢） 施工段 1#上风向 | 13:40-14:40 | 0.250 |
| 休宁县滨江西路路段（高速横江府 37 幢） 施工段 2#下风向 | 13:40-14:40 | 0.333 |
| 休宁县滨江西路路段（高速横江府 37 幢） 施工段 3#居民敏感点 | 13:40-14:40 | 0.317 |

表 1-3 无组织废气检测采样天气条件

| 采样起止时间 | 天气 | 风向 | 风速（m/s） | 气温（℃） | 气压（Kpa） |
|-------------|----|-----|---------|-------|---------|
| 13:40-14:40 | 阴 | 东北风 | 2.3 | 15 | 100.4 |

表 1-4 无组织废气检测点位图



废气质控信息

表 1-5 废气精密度控制情况统计表

| 项目 \ 内容 | 样品个数(个) | 全程序空白(个) | 实验室平行数(个) | 合格数(个) | 合格率(%) |
|---------|---------|----------|-----------|--------|--------|
| 颗粒物 | 3 | 0 | 0 | / | / |

表 1-6 废气准确度控制情况统计表

| 项目 \ 内容 | 实验室加标数(个) | 质控样数(个) | 合格数(个) | 合格率(%) |
|---------|-----------|---------|--------|--------|
| 颗粒物 | 0 | 3 | 3 | 100 |

表 2-1 噪声检测概况和分析方法

| | | | | |
|--------|------------------------------|-----------------------------|-----------------------|-------|
| 委托单位 | 上海伊世特科技管理有限公司 | | | |
| 联系人及电话 | 李华 13818855792 | 采样日期 | 2022.11.15、2022.11.16 | |
| 样品类别 | 噪声 | 分析日期 | 2022.11.15、2022.11.16 | |
| 检测地点 | 休宁县滨江西路高速横江府东苑 | 报告日期 | 2022.11.22 | |
| 检测项目 | 检测标准(方法)及编号(含年号) | 仪器设备名称、型号/规格、编号 | 仪器设备检定/校准有效期 | 方法检测限 |
| 气象参数 | / | 便携式风速风向仪 JY-FS-04 (2020072) | 2023.01.05 | / |
| 施工噪声 | 建筑施工场界环境噪声排放标准 GB 12523-2011 | 噪声仪 AWA6228+ (2020059) | 2023.08.08 | / |
| | 环境噪声监测技术规范噪声测量值修正 HJ706-2014 | | | |

黄山安琪尔环境检测有限公司检测报告

编号: CW27-04/A3

安环检(2022)第2112号

共4页 第3页

表 2-2 噪声检测结果

| 类别: 噪声 | | | | |
|------------|--------------------------|---|--------|------|
| 采样日期 | 检测点位 | 检测结果 dB(A) | | |
| | | 起止时间 | 昼间 Leq | 主要声源 |
| 2022.11.15 | 滨江西路施工路段场界外 1m 处 | 14:28-14:48 | 62.1 | 施工噪声 |
| | 高速横江府东苑 37 幢 2 单元门前 1m 处 | 14:59-15:09 | 56.9 | 施工噪声 |
| 2022.11.16 | 滨江西路施工路段场界外 1m 处 | 13:49-14:09 | 65.5 | 施工噪声 |
| | 高速横江府东苑 37 幢 2 单元门前 1m 处 | 14:20-14:30 | 57.4 | 施工噪声 |
| 检测点位示意图: | | <div>  </div> <div> <p>备注:</p> <p>1、检测当天气象参数: 日期: 2022.11.15; 天气: 阴; 风向: 北风; 风速: 1.8m/s;</p> <p>2、检测当天气象参数: 日期: 2022.11.16; 天气: 阴; 风向: 东北风; 风速: 2.3m/s;</p> <p>3、只检测昼间噪声。</p> </div> | | |

黄山安琪尔环境检测有限公司检测报告

编号: CW27-04/A3


安环检(2022)第2112号

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表 2-3 声级校准器校准

| 仪器名称 | 仪器型号/ 仪器编号 | 仪器设备 检定/校准 有效期 | 单位 | 标准值 | 校准日期 | 时间 | 仪器 显示 | 示值 误差 | 是否 合格 |
|-----------|-----------------------|----------------------|-------|----------|------------|-------|----------|----------|----------|
| 声级校 准器 | AWA6021A (2020057) | 2023.08.09 | dB(A) | 94.0±0.5 | 2022.11.15 | 08:26 | 93.8 | -0.2 | 合格 |
| | | | | | | 18:06 | 93.9 | -0.1 | 合格 |
| 声级校 准器 | AWA6021A (2020057) | 2023.08.09 | dB(A) | 94.0±0.5 | 2022.11.16 | 08:38 | 93.9 | -0.1 | 合格 |
| | | | | | | 19:01 | 93.9 | -0.1 | 合格 |

****报告结束****

编制: 

审核: 

签发: 

签发日期: 2022.11.22





Shangshan Township
in Xiuning County

安环检（2022）第 2114 号

检测报告

Test Report

项目名称： 亚行贷款安徽黄山新安江流域生态
保护与绿色发展项目（休宁县商山镇）

委托单位： 上海伊世特科技管理有限公司

报告日期： 2022 年 11 月 25 日



黄山安琪尔环境检测有限公司
Huangshan AnQier Environmental Detection CO,LTD



说 明

一、报告及复印件必须加盖“CMA”印章和检测报告专用章，否则无效。任何对于检测报告的涂改、增删、骑缝章不完整及无批准人签字均视作无效。

二、未经本机构同意不得复制（全文复制除外）本检测报告，不得利用本检测报告作任何商业性宣传。

三、当参数测定值小于方法检出限或最低检出浓度时，在检验检测报告中记为 ND，水记为 L，土壤记为<检出限。

四、本检测报告仅对当次检测有效，送检样品仅对来样的结果负责，不对样品来源负责。无法复现的样品，不受理申诉。

五、本单位保证工作的客观公正性、对委托单位的商业信息、技术文件等商业秘密进行保密义务。

六、本报告打印的检测员姓名与对应的检测原始记录表格中检测员签署姓名不一致的无效。

七、若委托单位对本次检测报告有异议，可在收到报告之日起十五日内，书面向我公司提出复检或仲裁申请，逾期不予受理。

八、除客户特别申明并支付档案管理费，本次检测的所有记录档案保存期限为六年。

九、除客户特别申明并支付样品管理费，所有样品超过标准规定的时效期均不再做留样。

检测机构地址：黄山市屯溪区社屋前路 30 号商业楼 101 室 3 楼

电话：0559-2531668

传真：0559-2531668

邮政编码：245000

黄山安琪尔环境检测有限公司检测报告

编号: CW27-04/A3

安环检(2022)第2114号

共4页 第1页

表 1-1 废气采样概况和分析方法

| | | | | |
|--------|--|---|--------------|------------------------|
| 委托单位 | 上海伊世特科技管理有限公司 | | | |
| 联系人及电话 | 李华 13818855792 | <input type="checkbox"/> 送样/ <input checked="" type="checkbox"/> 采样日期 | 2022.11.17 | |
| 样品类别 | 气 | 接样日期 | 2022.11.17 | |
| 分析日期 | 2022.11.17-2022.11.21 | 报告日期 | 2022.11.25 | |
| 检测项目 | 检测标准(方法)及编号(含年号) | 仪器设备名称、型号/规格、编号 | 仪器设备检定/校准有效期 | 方法检测限 |
| 气象参数 | / | 便携式风速风向仪 JY-FS-04 (2020072) | 2023.01.05 | / |
| 颗粒物 | 环境空气 总悬浮颗粒物的测定重量法 GB/T 15432-1995 及修改单 | 万分之一天平 AUW220 (2018014) | 2023.01.05 | 0.001mg/m ³ |

表 1-2 无组织废气检测结果

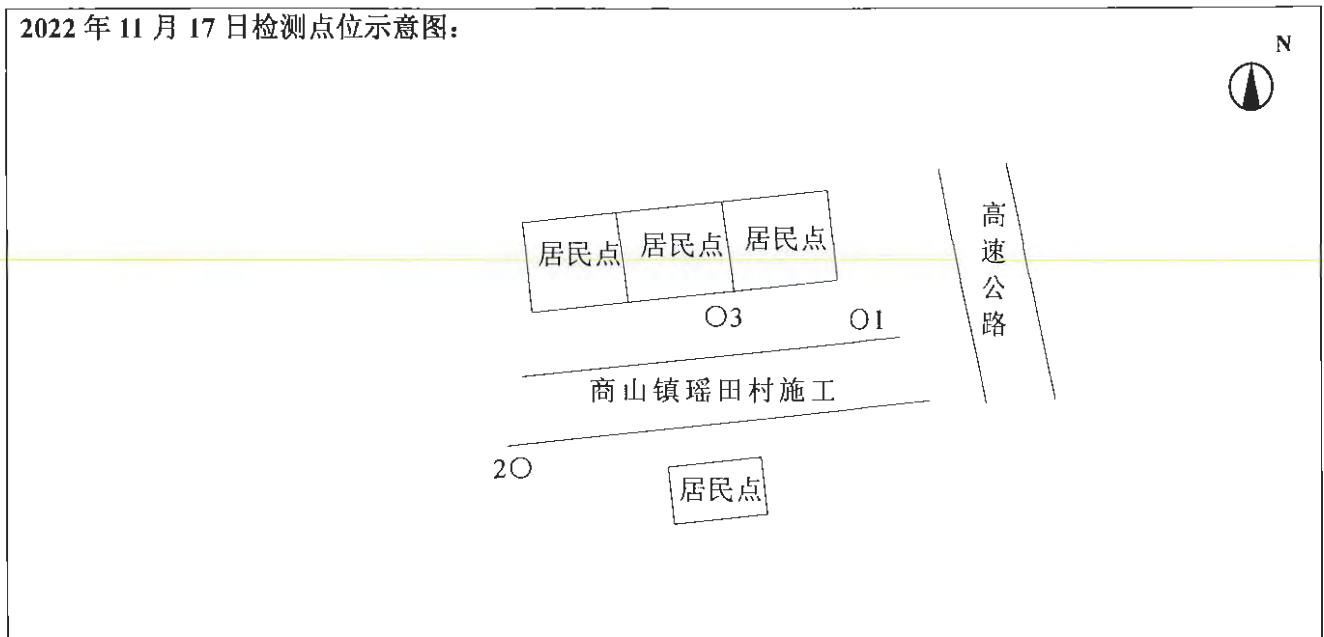
单位: mg/m³

| 采样点位 | 采样起止时间 | 检测项目 |
|----------------------|-------------|-------|
| | | 颗粒物 |
| 休宁县商山镇瑶田村施工段 1#上风向 | 14:20-15:20 | 0.217 |
| 休宁县商山镇瑶田村施工段 2#下风向 | 14:20-15:20 | 0.367 |
| 休宁县商山镇瑶田村施工段 3#居民敏感点 | 14:20-15:20 | 0.317 |

表 1-3 无组织废气检测采样天气条件

| 采样起止时间 | 天气 | 风向 | 风速 (m/s) | 气温 (℃) | 气压 (Kpa) |
|-------------|----|-----|----------|--------|----------|
| 14:20-15:20 | 阴 | 东北风 | 1.6 | 16 | 98.5 |

表 1-4 无组织废气检测点位图



废气质控信息

表 1-5 废气精密度控制情况统计表

| 项目 \ 内容 | 样品个数(个) | 全程序空白(个) | 实验室平行数(个) | 合格数(个) | 合格率(%) |
|---------|---------|----------|-----------|--------|--------|
| 颗粒物 | 3 | 1 | 0 | 1 | 100 |

表 1-6 废气准确度控制情况统计表

| 项目 \ 内容 | 实验室加标数(个) | 质控样数(个) | 合格数(个) | 合格率(%) |
|---------|-----------|---------|--------|--------|
| 颗粒物 | 0 | 2 | 2 | 100 |

表 1-7 全程序空白样分析值表

单位: mg/m³

| 项目 \ 内容 | 全程序空白样分析值 |
|---------|-----------|
| 颗粒物 | ND |

黄山安琪尔环境检测有限公司检测报告

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表 2-1 噪声检测概况和分析方法

| | | | | |
|--------|----------------------------------|-------------------------------|-----------------------|-------|
| 委托单位 | 上海伊世特科技管理有限公司 | | | |
| 联系人及电话 | 李华 13818855792 | 采样日期 | 2022.11.16、2022.11.17 | |
| 样品类别 | 噪声 | 分析日期 | 2022.11.16、2022.11.17 | |
| 检测地点 | 休宁县商山镇瑶田村 | 报告日期 | 2022.11.25 | |
| 检测项目 | 检测标准（方法）及编号（含年号） | 仪器设备名称、型号/规格、编号 | 仪器设备检定/校准有效期 | 方法检测限 |
| 气象参数 | / | 风速风向仪 ZH-8232（2022115） | 2023.06.05 | / |
| | | 便携式风速风向仪 JY-FS-04（2020072） | 2023.01.05 | |
| 施工噪声 | 建筑施工场界环境噪声排放标准 GB 12523-2011 | 噪声仪 AWA6228+ （2021081） | 2023.10.11 | / |
| | 环境噪声监测技术规范噪声测量 值修正 HJ706-2014 | | | |

表 2-2 噪声检测结果

| 类别：噪声 | | | | |
|------------|------------------------|-------------|--------|------|
| 采样日期 | 检测点位 | 检测结果 dB(A) | | |
| | | 起止时间 | 昼间 Leq | 主要声源 |
| 2022.11.16 | 瑶田村施工路段最近敏感点门前 1m 处 | 13:52-14:02 | 55.9 | 施工噪声 |
| | 瑶田村施工路段施工场界外 1m 处 | 13:29-13:49 | 56.6 | 施工噪声 |
| 2022.11.17 | 瑶田村施工路段最近敏感点门前 1m 处 | 13:33-13:43 | 54.0 | 施工噪声 |
| | 瑶田村施工路段施工场界外 1m 处 | 13:50-14:10 | 55.6 | 施工噪声 |

黄山安琪尔环境检测有限公司检测报告

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续表 2-2 噪声检测结果

| | |
|---|---|
| 检测点位示意图： | 备注： |
|  | 1、检测当天气象参数： 日期：2022.11.16； 天气：阴； 风向：东北风； 风速：1.8m/s； 2、检测当天气象参数： 日期：2022.11.17； 天气：阴； 风向：东北风； 风速：1.6m/s； 3、2022.11.16-2022.11.17 检测期间， 检测点位噪声主要受覆土工序影响； 4、只检测昼间噪声。 |

表 2-3 声级校准器校准

| 仪器名称 | 仪器型号/仪器编号 | 仪器设备检定/校准有效期 | 单位 | 标准值 | 校准日期 | 时间 | 仪器显示 | 示值误差 | 是否合格 |
|-------|-----------------------|--------------|-------|----------|------------|-------|------|------|------|
| 声级校准器 | AWA6021A (2020057) | 2023.08.09 | dB(A) | 94.0±0.5 | 2022.11.16 | 08:04 | 93.9 | -0.1 | 合格 |
| | | | | | | 17:19 | 93.9 | -0.1 | 合格 |
| 声级校准器 | AWA6021A (2020057) | 2023.08.09 | dB(A) | 94.0±0.5 | 2022.11.17 | 11:34 | 94.0 | 0.0 | 合格 |
| | | | | | | 18:28 | 94.0 | 0.0 | 合格 |

****报告结束****

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签发：[Signature]





Provincial Road
S326 in urban area,
Qimen County

安环检（2022）第 2115 号

检测报告

Test Report

项目名称：亚行贷款安徽黄山新安江流域生态保护
与绿色发展项目（祁门县城 S326 省道）

委托单位：上海伊世特科技管理有限公司

报告日期：2022 年 11 月 30 日

黄山安琪尔环境检测有限公司
Huangshan AnQier Environmental Detection CO,LTD



说 明

一、报告及复印件必须加盖“CMA”印章和检测报告专用章，否则无效。任何对于检测报告的涂改、增删、骑缝章不完整及无批准人签字均视作无效。

二、未经本机构同意不得复制（全文复制除外）本检测报告，不得利用本检测报告作任何商业性宣传。

三、当参数测定值小于方法检出限或最低检出浓度时，在检验检测报告中记为 ND，水记为 L，土壤记为<检出限。

四、本检测报告仅对当次检测有效，送检样品仅对来样的结果负责，不对样品来源负责。无法复现的样品，不受理申诉。

五、本单位保证工作的客观公正性、对委托单位的商业信息、技术文件等商业秘密进行保密义务。

六、本报告打印的检测员姓名与对应的检测原始记录表格中检测员签署姓名不一致的无效。

七、若委托单位对本次检测报告有异议，可在收到报告之日起十五日内，书面向我公司提出复检或仲裁申请，逾期不予受理。

八、除客户特别申明并支付档案管理费，本次检测的所有记录档案保存期限为六年。

九、除客户特别申明并支付样品管理费，所有样品超过标准规定的时效期均不再做留样。

检测机构地址：黄山市屯溪区社屋前路 30 号商业楼 101 室 3 楼

电话：0559-2531668

传真：0559-2531668

邮政编码：245000

黄山安琪尔环境检测有限公司检测报告

编号: CW27-04/A3

安环检(2022)第2115号

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表 1-1 废气采样概况和分析方法

| | | | | |
|--------|--|---|--------------|------------------------|
| 委托单位 | 上海伊世特科技管理有限公司 | | | |
| 联系人及电话 | 李华 13818855792 | <input type="checkbox"/> 送样/ <input checked="" type="checkbox"/> 采样日期 | 2022.11.23 | |
| 样品类别 | 气 | 接样日期 | 2022.11.23 | |
| 分析日期 | 2022.11.23-2022.11.25 | 报告日期 | 2022.11.30 | |
| 检测项目 | 检测标准(方法)及编号(含年号) | 仪器设备名称、型号/规格、编号 | 仪器设备检定/校准有效期 | 方法检测限 |
| 气象参数 | / | 风速风向仪 ZH-8232(2022115) | 2023.06.05 | / |
| 颗粒物 | 环境空气 总悬浮颗粒物的测定重量法 GB/T 15432-1995 及修改单 | 万分之一天平 AUW220(2018014) | 2023.01.05 | 0.001mg/m ³ |

表 1-2 无组织废气检测结果

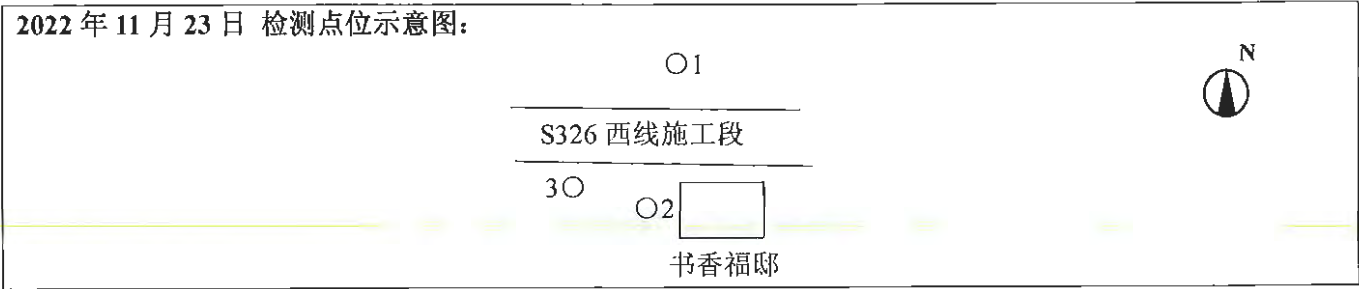
单位: mg/m³

| 采样点位 | 采样起止时间 | 检测项目 |
|-------------------------------------|-------------|-------|
| | | 颗粒物 |
| 祁门县城 S326 省道施工段 1#上风向 | 09:30-10:30 | 0.217 |
| 祁门县城 S326 省道施工段 3#下风向 | 09:30-10:30 | 0.333 |
| 祁门县城 S326 省道施工段 2#敏感点 (书香福邸小区门前) | 09:30-10:30 | 0.350 |

表 1-3 无组织废气检测采样天气条件

| 采样起止时间 | 天气 | 风向 | 风速(m/s) | 气温(℃) | 气压(Kpa) |
|-------------|----|-----|---------|-------|---------|
| 09:30-10:30 | 阴 | 东北风 | 1.5 | 18 | 99.5 |

表 1-4 无组织废气检测点位图



废气质控信息

表 1-5 废气精密度控制情况统计表

| 项目\内容 | 样品个数（个） | 全程序空白（个） | 实验室平行数（个） | 合格数（个） | 合格率（%） |
|-------|---------|----------|-----------|--------|--------|
| 颗粒物 | 3 | 1 | 0 | / | / |

表 1-6 废气准确度控制情况统计表

| 项目\内容 | 实验室加标数（个） | 质控样数（个） | 合格数（个） | 合格率（%） |
|-------|-----------|---------|--------|--------|
| 颗粒物 | 0 | 6 | 6 | 100 |

表 1-7 全程序空白样分析值表

单位：mg/m³

| 项目\内容 | 全程序空白样分析值 |
|-------|-----------|
| 颗粒物 | ND |

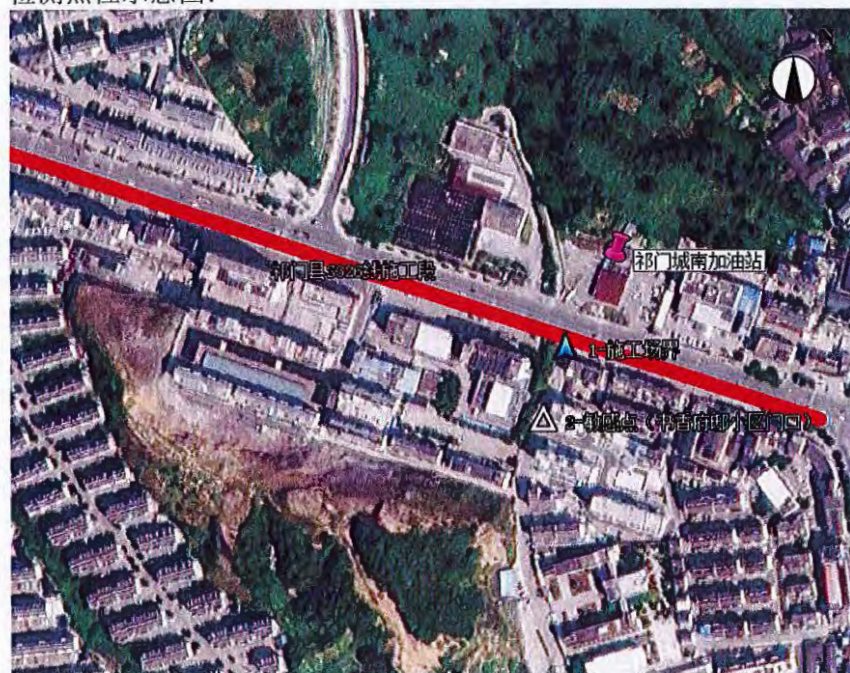
表 2-1 噪声检测概况和分析方法

| | | | | |
|--------|-----------------------------------|---------------------------|-----------------------|-------|
| 委托单位 | 上海伊世特科技管理有限公司 | | | |
| 联系人及电话 | 李华 13818855792 | □送样/☑采样日期 | 2022.11.21、2022.11.23 | |
| 样品类别 | 噪声 | 接样日期 | 2022.11.21、2022.11.23 | |
| 检测地点 | 祁门县 S326 省道 | 报告日期 | 2022.11.30 | |
| 检测项目 | 检测标准（方法）及编号（含年号） | 仪器设备名称、型号/规格、编号 | 仪器设备检定/校准有效期 | 方法检测限 |
| 气象参数 | / | 风速风向仪 ZH-8232（2022115） | 2023.06.05 | / |
| | | 风速风向仪 ZH-8232（2022116） | 2023.06.05 | |
| 厂界噪声 | 施工噪声排放标准 GB 12523-2011 | 噪声仪 AWA6228+ （2021081） | 2023.10.11 | / |
| | 环境噪声监测技术规范噪声测量值 修正 HJ 706-2014 | | | |

表 2-2 噪声检测结果

| 类别: 噪声 | | | | |
|------------|----------------------------|-------------|--------|---------------|
| 检测时间 | 检测点位 | 检测结果 dB(A) | | |
| | | 起止时间 | 昼间 Leq | 主要声源 |
| 2022.11.21 | S326 西线施工段场界外 1m 处 | 14:09-14:29 | 69.4 | 施工噪声、 交通噪声 |
| | S326 西线施工段最近敏感点窗 外 1m 处 | 13:57-14:07 | 57.8 | 施工噪声、 交通噪声 |
| 2022.11.23 | S326 西线施工段场界外 1m 处 | 09:32-09:52 | 65.9 | 施工噪声、 交通噪声 |
| | S326 西线施工段最近敏感点窗 外 1m 处 | 10:07-10:17 | 59.4 | 施工噪声、 交通噪声 |

检测点位示意图:



备注:

1、检测当天气象参数:

日期: 2022.11.21;

天气: 阴;

风向: 东北风;

风速: 2.0m/s;

2、检测当天气象参数:

日期: 2022.11.23;

天气: 阴;

风向: 东北风;

风速: 1.5m/s;

3、监测期间, 道路半边施工, 半边正常通行。

黄山安琪尔环境检测有限公司检测报告

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表 2-3 声级校准器校准

| 仪器名称 | 仪器型号/仪器编号 | 仪器设备检定/校准有效期 | 单位 | 标准值 | 校准日期 | 时间 | 仪器显示 | 示值误差 | 是否合格 |
|-------|-----------------------|--------------|-------|----------|------------|-------|------|-------|------|
| 声级校准器 | AWA6021A (2020057) | 2023.08.09 | dB(A) | 94.0±0.5 | 2022.11.21 | 08:06 | 93.7 | -0.03 | 合格 |
| | | | | | | 19:06 | 93.8 | -0.02 | 合格 |
| 声级校准器 | AWA6021A (2020057) | 2023.08.09 | dB(A) | 94.0±0.5 | 2022.11.23 | 08:03 | 93.8 | -0.2 | 合格 |
| | | | | | | 18:03 | 93.8 | -0.2 | 合格 |

报告结束

编制：许川子

审核：

签发：

签发日期：2022.11.30





Zhongxinnan Road in
urban area, Qimen
County

安环检（2022）第 2198 号

检测报告

Test Report



项目名称：亚行贷款安徽黄山新安江流域
生态保护与绿色发展项目（祁门县中心南路）

委托单位：上海伊世特科技管理有限公司

报告日期：2022 年 11 月 29 日

黄山安琪尔环境检测有限公司
Huangshan AnQier Environmental Detection CO,LTD



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四、本检测报告仅对当次检测有效，送检样品仅对来样的结果负责，不对样品来源负责。无法复现的样品，不受理申诉。

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九、除客户特别申明并支付样品管理费，所有样品超过标准规定的时效期均不再做留样。

检测机构地址：黄山市屯溪区社屋前路 30 号商业楼 101 室 3 楼

电话：0559-2531668

传真：0559-2531668

邮政编码：245000

黄山安琪尔环境检测有限公司检测报告

编号: CW27-04/A3

安环检(2022)第 2198 号

共 4 页 第 1 页

表 1-1 废气采样概况和分析方法

| | | | | |
|--------|--|---|--------------|------------------------|
| 委托单位 | 上海伊世特科技管理有限公司 | | | |
| 联系人及电话 | 李华 13818855792 | <input type="checkbox"/> 送样/ <input checked="" type="checkbox"/> 采样日期 | 2022.11.23 | |
| 样品类别 | 气 | 接样日期 | 2022.11.23 | |
| 分析日期 | 2022.11.23-2022.11.25 | 报告日期 | 2022.11.29 | |
| 检测项目 | 检测标准(方法)及编号(含年号) | 仪器设备名称、型号/规格、编号 | 仪器设备检定/校准有效期 | 方法检测限 |
| 气象参数 | / | 风速风向仪 ZH-8232 (2022115) | 2023.06.05 | / |
| 颗粒物 | 环境空气 总悬浮颗粒物的测定重量法 GB/T 15432-1995 及修改单 | 万分之一天平 AUW220 (2018014) | 2023.01.05 | 0.001mg/m ³ |

表 1-2 无组织废气检测结果

单位: mg/m³

| 采样点位 | 采样起止时间 | 检测项目 |
|--------------------------|-------------|-------|
| | | 颗粒物 |
| 1#上风向 | 10:45-11:45 | 0.233 |
| 2#敏感点 (中心南路 155 号楼门前) | 10:45-11:45 | 0.317 |
| 3#下风向 | 10:45-11:45 | 0.367 |

表 1-3 无组织废气检测采样天气条件

| 采样时间 | 天气 | 风向 | 风速 (m/s) | 气温 (℃) | 气压 (Kpa) |
|-------------|----|-----|----------|--------|----------|
| 10:45-11:45 | 阴 | 东北风 | 1.5 | 18 | 99.5 |

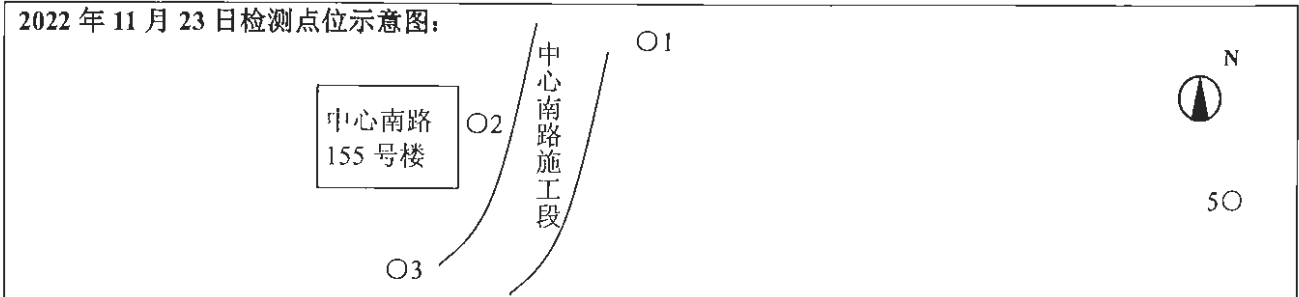
黄山安琪尔环境检测有限公司检测报告

编号: CW27-04/A3

安环检(2022)第2198号

共4页 第2页

表 1-4 无组织废气检测点位图



废气质控信息表

表 1-5 废气精密度控制情况统计表

| 项目\内容 | 样品个数(个) | 全程序空白(个) | 实验室平行数(个) | 合格数(个) | 合格率(%) |
|-------|---------|----------|-----------|--------|--------|
| 颗粒物 | 3 | 0 | 0 | / | / |

表 1-6 废气准确度控制情况统计表

| 项目\内容 | 实验室加标数(个) | 质控样数(个) | 合格数(个) | 合格率(%) |
|-------|-----------|---------|--------|--------|
| 颗粒物 | 0 | 6 | 6 | 100 |

表 2-1 噪声检测概况和分析方法

| | | | | | |
|--------|------------------------------|-------------------------|-----------------------|-------|--|
| 委托单位 | 上海伊世特科技管理有限公司 | | | | |
| 联系人及电话 | 李华 13818855792 | 采样日期 | 2022.11.21、2022.11.23 | | |
| 样品类别 | 噪声 | 分析日期 | 2022.11.21、2022.11.23 | | |
| 检测地点 | 祁门县中心南路 | 报告日期 | 2022.11.29 | | |
| 检测项目 | 检测标准(方法)及编号(含年号) | 仪器设备名称、型号/规格、编号 | 仪器设备检定/校准有效期 | 方法检测限 | |
| 气象参数 | / | 风速风向仪 ZH-8232 (2022115) | 2023.06.05 | / | |
| | | 风速风向仪 ZH-8232 (2022116) | 2023.06.05 | / | |
| 施工噪声 | 建筑施工场界环境噪声排放标准 GB 12523-2011 | 噪声仪 AWA6228+ (2021081) | 2023.10.11 | / | |
| | 环境噪声监测技术规范噪声测量值修正 HJ706-2014 | | | | |

表 2-2 噪声检测结果

| 类别: 噪声 | | | | |
|------------|----------------------|-------------|--------|---------|
| 采样日期 | 检测点位 | 检测结果 dB(A) | | |
| | | 起止时间 | 昼间 Leq | 主要声源 |
| 2022.11.21 | 中心南路施工段场界外 1m 处 | 13:29-13:49 | 63.2 | 施工、交通噪声 |
| | 中心南路施工段场最近敏感点窗外 1m 处 | 13:19-13:29 | 55.0 | 施工、交通噪声 |
| 2022.11.23 | 中心南路施工段场界外 1m 处 | 10:42-11:02 | 66.1 | 施工、交通噪声 |
| | 中心南路施工段场最近敏感点窗外 1m 处 | 11:14-11:24 | 55.8 | 施工、交通噪声 |

检测点位示意图:



备注:

1、监测当天气象参数:

日期: 2022.11.21;

天气: 阴;

风向: 东北风;

风速: 2.0m/s;

2、监测当天气象参数:

日期: 2022.11.23;

天气: 阴;

风向: 东北风;

风速: 1.5m/s;

3、检测器期间, 主要受道路噪声影响。

4、只检测昼间噪声。

黄山安琪尔环境检测有限公司检测报告

编号: CW27-04/A3

安环检(2022)第 2198 号

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表 2-3 声级校准器校准

| 仪器名称 | 仪器型号/ 仪器编号 | 仪器设备检定 /校准有效期 | 单位 | 标准值 | 校准日期 | 时间 | 仪器 显示 | 示值 误差 | 是否 合格 |
|-----------|-----------------------|------------------|-------|----------|------------|-------|----------|----------|----------|
| 声级校 准器 | AWA6021A (2020057) | 2023.08.09 | dB(A) | 94.0±0.5 | 2022.11.21 | 08:06 | 93.7 | -0.3 | 合格 |
| | | | | | | 19:06 | 93.8 | -0.2 | 合格 |
| 声级校 准器 | AWA6021A (2020057) | 2023.08.09 | dB(A) | 94.0±0.5 | 2022.11.23 | 08:03 | 93.8 | -0.2 | 合格 |
| | | | | | | 18:03 | 93.8 | -0.2 | 合格 |

****报告结束****

编制: 祁旭沛

审核: 祁旭沛

签发: 祁旭沛



签发日期: 2022.11.28

APPENDIX 3 PHOTOS OF ON-SITE EXTERNAL ENVIRONMENTAL MONITORING



Noise monitoring of pumping station in Huizhou District



Water samples collected from the effluent of WWTS in Huizhou District



Monitoring for TSP of site boundary in Bingjiangdong Road, Xiuning County



Monitoring for TSP of sensitive receptor in Fufeng Road, She County



Monitoring for noise of site boundary in urban area, Qimen County



Monitoring for TSP of sensitive receptor in Shangshan Village, Xiuning County

**APPENDIX 4 THIRD PARTY (ENTRUSTED BY O&M UNIT) MONITORING REPORT OF
TUNXI DISTRICT WWTS**



211212051930

Appendix 4 Third-party Monitoring Report

检 测 报 告

嘉讯[2022]-367 号

监测类别：委 托 监 测

样品类别：生 活 污 水



黄山嘉讯环境检测技术服务有限公司

2022 年 12 月 1 日

水质采样概况和分析方法

| | | | | |
|------------|---|-----------|---|------------|
| 委托单位 | 黄山拓达科技有限公司 | 样品来源 | 送样 | |
| 客户名称及联系方式 | 王国华 15222998716 | 送样人 | 王国华 | |
| 单位地址 | 九龙经济开发区乐山路 10 号 | | | |
| 检测项目 | 分析方法 | 检出限 | 检测仪器及编号 | 检定/校准有效期 |
| pH 值 | 水质 pH 值的测定 电极法 HJ 1147-2020 | / | PHS-25pH 计 (020) | 2023-06-27 |
| 化学需氧量 | 水质 化学需氧量的测定 重铬酸盐法 HJ 828-2017 | 4mg/L | DL-802 型 COD 消解器 (042) | / |
| 氨氮 | 水质 氨氮的测定 纳氏试剂分光光度法 HJ 535-2009 | 0.025mg/L | 岛津 UV-1900i 紫外可见 分光光度计 (015) | 2023-06-27 |
| 总磷 | 水质 总磷的测定 钼酸铵分光光度法 GB/T 11893-1989 | 0.01mg/L | 岛津 UV-1900i 紫外可见 分光光度计 (015) | 2023-06-27 |
| 总氮 | 水质 总氮的测定 碱性过硫酸钾消解 紫外分光光度法 HJ 636-2012 | 0.05mg/L | 岛津 UV-1900i 紫外可见 分光光度计 (015) | 2023-06-27 |
| 悬浮物 | 水质 悬浮物的测定 重量法 GB/T 11901-1989 | 4mg/L | FA2104 电子天平 (016) | 2023-06-27 |
| 水温 | 水质 水温的测定 温度计或颠倒温度计 测定法 GB/T 13195-1991 | / | 水银温度计 (055) | 2023-06-28 |
| ▲动植物 油类 | 水质 石油类和动植物油类的测定 红外分光光度法 HJ 637-2018 | 0.06mg/L | FYHW-2000B 红外分光 测油仪 (AHMF-YQ-00801) | 2023-01-09 |

检测技术



检测报告专

1001011

水质检测结果

| | | | |
|--------------|--------------------------|------|----------------|
| 送样日期 | 2022年11月24日 | 分析日期 | 2022年11月24-25日 |
| 检测项目 | 检测点位、样品编号、状态及结果 | | |
| | 中泽污水处理站出水口 | | |
| | 367W1-1 | | |
| | 较清、无色、无异味 | | |
| 水温(℃) | Water Temperature | 25.1 | |
| pH值 | PH | 7.2 | |
| 化学需氧量(mg/L) | CODcr | 12 | |
| 氨氮(mg/L) | NH ₃ -N | 2.25 | |
| 总磷(mg/L) | TP | 0.45 | |
| 总氮(mg/L) | TN | 3.97 | |
| 悬浮物(mg/L) | SS | 8 | |
| ▲动植物油类(mg/L) | Animal and Vegetable Oil | 0.16 | |

备注:加“▲”标注的检测项目,本公司委托安徽迈峰检测技术有限公司进行检测分析,其资质认定证书编号为:171212050705,有效期至2023年01月18日。

报告编制人: 122

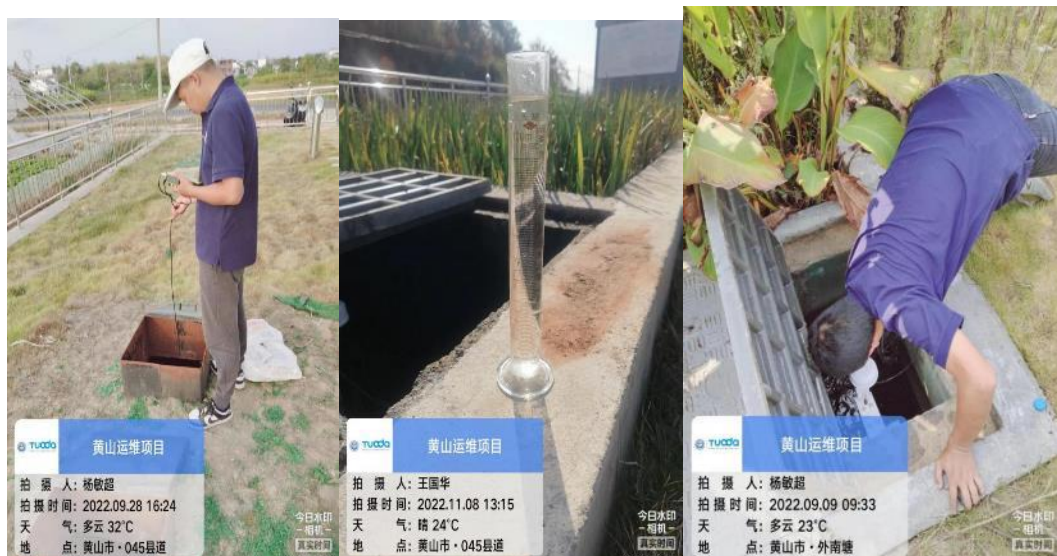
审核人: 祁晓群

签发人: 祁晓

签发日期: 2022.12.1



APPENDIX 5 OPERATION AND MAINTENANCE REPORT



APPENDIX 6 SEMI-ANNUAL GIF IMPLEMENTATION PROGRESS REPORT

Anhui Huangshan Xin'an River Ecological Protection and Green Development Project

Loan Numbers: 3888-PRC

Huangshan Green Investment Fund ESMS Implementation Report

Reporting period:

July 1 to December 31, 2022

Prepared by Huangshan Trust Investment Group (HTIC)

Date: January 2023

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I. Overview

On December 1, 2019, the Asian Development Bank (hereinafter, ADB) approved the ecological protection and green development project of the Xin'an River Basin in Huangshan, Anhui Province. ADB and the Chinese government signed the loan agreement on June 17, 2020, and the project took effect on September 25, 2020. Among them, the Green Investment Fund (hereinafter, the project) is a pilot sub-project of the green financing mechanism for the Anhui Huangshan Xin'an River Ecological Protection and Green Development Project, with a planned total investment of 200 million RMB, of which ADB loan 100 million RMB, KfW 50 million RMB, and government counterpart funds of 50 million RMB. The ADB loan has a 25-year term, with a 6-year grace period. The loan maturity date is December 1, 2044.

The loan of Anhui Huangshan Xin'an River Ecological Protection and Green Development Project will be used to support the completion of four outputs. Output 1: Urban point source pollution management facilities upgraded. Output 2: Enhancement of rural point and non-point source pollution control facilities and systems. Output 3: Piloting of Green financing mechanisms. This includes the establishment, piloting and operation of a (i) Green Incentive Fund to encourage farmers to adopt sustainable farm management practices to address agricultural non-point source pollution in Huangshan; and (ii) Green Investment Fund to invest in SMEs involved in green business. Output 4: Strengthen the capacity for ecological system and project management. This will enhance Huangshan Municipal Government's (HMGs) capacity in water resources and flood forecasting management in the Xin'an River Basin.

As an innovative sub-project of the green financing mechanism pilot, the most significant difference between this project and other projects that operating in the traditional mode is that the project resources of this project are used to support the development of local characteristic agriculture through market-based operation. This project will provide financial support for small and medium-sized enterprises participating in green business development, and will further promote their involvement and expansion in the fields of eco-agriculture, eco-tourism and pollution control. Compared to China's traditional input-based and infrastructure-oriented public interventions, the new financing mechanism is expected to be effective, with the innovative interventions, will have a wider impact beyond the project.

According to the Loan Agreement signed between the Ministry of Finance and ADB, the implementing agency of this project is Huangshan Xintou Investment Co., Ltd. (HXIC), a wholly-owned subsidiary of Huangshan Trust Investment Group (HTIC), as the general partner and fund manager to manage the green investment fund, and adopt the "Environmental and Social Management System" (hereinafter referred to as ESMS) approved by ADB, and perform responsibilities in the environmental and social management system in accordance with the ESMS specifications.

In the second half of 2022, the project has paid a total of 250,627.74 RMB of interest and fees, of which the ADB loan commitment fee of 33,566.25 RMB and an interest fee of

139,007.43 RMB. The project implementing agency has strictly followed the on-lending agreement and performed the contract in a timely manner. (As of December 31, 2022, a total of 803,307.44 RMB of related interests and fees have been paid.)

In the second half of 2022, this project has successfully promoted the management and application of sub-projects, including: 1) Continue to promote the post-investment management of the first sub-project (social service promotion project of Yixian County Younong Ecological Agriculture Co., LTD.); 2) Received no objection opinion from ADB for the second project (technology research and development and industrialization project of Huangshan Tianzhidu Environmental Technology Development Co., LTD.).

In the second half of 2022, as the Green Investment Fund project continues to move forward, the implementing agency continue to implement ESMS in accordance with ADB requirements, and also focus on: 1) Continue to optimize the ESMS, including requesting modifications to the ESMS document to meet the needs of investment projects other than eco-agriculture; 2) Continue the in-depth implementation of ESMS in the first sub-project, including further improvement and upgrading of agricultural technology; 3) Gain experience and maintain the sustainable development of ESMS; 4) Retention of three environmental officers and three social officers of HTIC named in the appointment notice in the president's directive to be responsible for ESMS implementation. 5) Emphasis on the retention of environmental officers appointed by the investee sub-project and provide them with regular training in ESMS implementation. 6) The ESMS updates incorporated into the EMP will be completed before March 31, 2023.

In the second half of 2022, Covid-19 had a relatively small impact on the project. Due to the adjustment of the national epidemic prevention and control policy in early December, Covid-19 cases were reported successively in Huangshan City in mid-to-late December, but the duration was relatively short, which did not affect the normal operation of implementing agencies and sub-projects.

In the second half of 2022, the HMG has constantly carried out Covid-19 prevention and control, and the Emergency Headquarters of Huangshan Epidemic Prevention and Control issued various epidemic prevention and control measures in a timely manner. Since the implementing agency is a state-owned enterprise, it strictly abides by the relevant Covid-19 prevention and control requirements of the municipal government, and has strict internal prevention and control measures, including 1) publishing daily epidemic prevention and control reports; 2) formulating a work plan for disinfection and cleaning of office areas; 3) requiring staffs to wear masks during work; 4.) tracking the health code information of staffs and customers regularly.

In the second half of 2022, the implementing agency requires the sub-project agencies to, in combination with national prevention and control regulations and guidance, keep abreast of the local situation of Covid-19, have a detailed understanding of local prevention and control measures, and formulate corresponding epidemic prevention and control plans, including 1) the provision of epidemic prevention materials; 2) the publicity of protection knowledge and disinfection management; 3) strengthening the management of company premises.

In the second half of 2022, the main activities of the first sub-project included: full process socialization service for the original 8,757 mu of rice in Huangshan City, promotion and application of intelligent precision seeding method and centralized seedling cultivation method, use of carbon-based seedling cultivation matrix, carbon-based organic fertilizer and carbon-based compound fertilizer. The location of the activity belonged to the field, and the activity was aimed at the land and the farmer. So Covid-19 had little impact on the implementation of these activities.

II . Main activities and measures

A. Main activities

With the joint efforts of the project office, the consultant team and the implementing agency, the important activities related to the environmental and social aspects during the second half of 2022 are as follows:

Carrying out project screening. The ESMS procedures have established providing step-by-step procedures to assess and manage potential environmental and social impacts associated with equity investment applications under the Green Investment Fund. In the second half of 2022, the implementing agency screened the projects applying for Huangshan Green Investment Fund in strict accordance with the ESMS requirements, preliminarily assessed whether the projects met the requirements of the fund investment and ESMS, a total of 4 projects have been evaluated, and 2 sub-projects are selected for further due diligence. (Refer to Appendix I) The selection of sub-projects should meet both the investment requirements of the project approved by the Huangshan Government and the requirements of the activities supported by ESMS, both of which maintain the same criteria. Therefore, the project should be under the supervision and guidance by ADB and the HMG when implementing ESMS, so as to ensure effective quality control of the ESMS implementation.

Submitting the due diligence report of the second investment project. In the second half of 2022, the due diligence and ESMS evaluation of a sub-project (Huangshan Tianzhidu Environmental Technology Development Co., LTD.) was conducted and submitted to ADB for review, and ADB replied with no objection opinion on September 13. As of December 31, 2022, the second investment project is in the process of signing the equity investment agreement.

Ongoing management of the first investment project. In the second half of 2022, the implementing agency continued to strengthen the monitoring of the implementation effect of ESMS on the first investment subproject, and carried out orderly the post-investment management of enterprises according to the investment management plan. First, one director was dispatched to participate in the enterprise management. Second, supervision and inspection for the enterprise was carried out in the aspects of daily operation, work progress and ability improvement, in the way of regular supervision. Thirdly, on-site inspection was carried out irregularly, including on-site financial and system inspection of the enterprise social service

center. Fourthly, professional financial, legal, agricultural technical personnels were provided to support the enterprises. The implementing agency found that subprojects with ESMS have had more focus on environmental and social development, on upgrading agricultural technologies, and provided more training opportunities for women than those without ESMS. This shows that ESMS has been integrated into the sub-project activities.

Strengthening the sustainable development of ESMS. The original intention of establishing and implementing ESMS was to assess and manage the possible environmental and social impacts of the implementing agency's activities. The establishment of ESMS is consistent with the green finance development concept of implementing agencies. The next step is to continue to supervise the sub-projects to establish green finance models based on ESMS, to continuously adjust the management and control standards for environmental and social risks of themselves and their client groups, and to strengthen value dissemination and guide the continuous sustainable development of sub-projects through standardizing the internal management of sub-projects, strengthening financial guidance, and organizing green finance training. In addition, an application was made to modify the ESMS document to accommodate the needs of investment projects other than eco-agriculture projects, and this work is in progress and is expected to be submitted to ADB for review in February.

B. Environmental Safeguard Measures

In the second half of 2022, the implementing agency completed the investment of 1 sub-project, and implemented ESMS within the sub-project enterprise and the farmland that under its responsibility

In the second half of 2022, the implementing agency took regular management measures for the implementation of the sub-projects, including checking the risk information of the sub-projects once a week, collecting the monthly financial statements of the enterprise on time, and conducting on-site inspections twice on the implementation of investment activities (Appendix II). The sub-projects are effectively supervised.

In the second half of 2022, one product quality inspection (refer to Appendix 3) had been conducted according to the green food rice standard NY/T419-2021, and the results were qualified.

The specific activities within the farmland scope of the first sub-project are described as follows:

1. Agricultural Socialization Service

In the second half of 2022, the sub-project provided 7 agricultural cooperatives and 7 family farms with full-process socialized agricultural services, covering a total of 8,757 mu of farmland, all of which were based on the existing normal farmland within Huangshan City. The smallest area of farmland is 115 mu, while the largest area is 1663 mu.

The sub-project provided seedling raising, mechanical tillage, mechanical transplanting and transplanting, application of basal fertilizer, control of pests and weeds, and harvesting (rapeseed, corn) services within the scope of farmland.

Main practices: 1) non-GMO rice varieties certified by the state were selected for the purchase of rice seeds; 2) Planting was in accordance with the requirements of green product standards; 3) corn and rapeseed straws were returned to the field; 4) Agricultural products were tested in batches, all met the national rice standard GB/T1354-2018, the green food rice standard NY/T419-2014 and the national food safety standard GB14881-2013.

Progress in the implementation period: (1) The bottleneck problems such as the leakage of rice seedlings in the mechanical transplanting of rice seedlings were solved by popularizing the precision sowing machine transplanting technology. The amount of seed used per mu was reduced by 30%, and the yield per mu increased by 8-10%. (2) In order to promote new rice varieties (non-transgenic varieties) and ecological efficient cultivation techniques, 110 mu of experimental demonstration fields were sown. Under the condition of no urea and herbicide, the average yield of dry rice per mu reached 1410 jin, which increased by more than 40% compared with the original yield of rice per mu in mountainous areas. (3) 70% of the straw was bundled away from the field, and 30% of the straw was crushed and returned to the field. In winter, farming stopped. (4) On-site observation of rice production in the city was organized, and new varieties, new technologies and new equipment were actively promoted to the city. In 2023, it is planned to popularize planting 50,000 mu in Huangshan City.

2. Application of intelligent precision seeding and concentrated seedling raising

In the first half of 2022, relying on the scientific and technological support of the China Rice Research Institute, the sub-project carried out intelligent and precise seedling raising services, which can provide 20,000 mu of seedling raising services, making rice seedling raising standardized and large-scale. The seedling nursery center is composed of seed soaking tank, centrifuge, seeding line, substrate elevator, tray supply machine, tray stacker, seedling room, temperature and humidity controller, forklift and so on.

Progress in implementation period: In the second half of 2022, the precision sowing and intelligent seedling cultivation technology has been widely recognized by major grain growers, and the technology has been promoted in Huangshan, Xuancheng, Chuzhou and Maanshan in Anhui Province. The company studied the mechanical weaknesses in agricultural production services, and organized the research and development of three technologies and equipment: "intelligent field seedling system, intelligent fertilizer spreader, and weeding robot". Through digital management, the intelligent field seedling raising system can realize intelligent management of field seedling raising, produce good seedling quality, reduce labor intensity, and save labor and time. At present, the system has been successfully developed and will be put into use in 2023. The intelligent fertilizer spreader solved the bottleneck problems of uneven field fertilizer spreading, inaccurate fertilizer spreading, fertilizer waste and difficult field fertilizer transportation. The prototype has been already tested in the field and will be available in 2023.

Weeding robot, with mechanical transplanting and through intelligent identification and physical weeding, can realize the complete prohibition of herbicides in rice field.. At present, the research and development program has been finalized, and the equipment is under development, and it is planned to be put into field test in 2023.

3. Application of straw biomass charcoal fertilizer

Progress of implementation: In the second half of 2022, on the basis of the technical research and development of "Research on Key technologies of biochar Production of Straw and its industrial application", which is co-conducted by the sub-project and Nanjing Agricultural University, crop wastes such as straw and rice husk were carbonized to produce carbon-based seedling cultivation matrix, carb-based organic fertilizer and carb-based compound fertilizer. According to the experimental performance, compared with the substrate used by the control company, the seedlings cultivated by the carbon-based seedling cultivation substrate had more developed roots, advanced roots and lower cost. The field test is planned to be carried out in 2023. Rice husk charcoal was used to replace peat in the production of carbon based fertilizer, which can reduce peat exploitation and protect the ecological environment.

A comparative test of black corn planting and Huangshan tribute chrysanthemum planting was conducted in Longjiang village, Yixian County, and Dingtan village, Shexian County, respectively. Compared with conventional fertilizer, carbon-based organic fertilizer could promote the plant production of Huangshan Tribute chrysanthemum, improving the yield and quality of Huangshan Tribute chrysanthemum. In terms of plant growth, the plants that used biochar based fertilizer were 11.4cm taller than those that used conventional fertilizer, and the crown width was 5.4cm wider, the stem was 2.59mm wider, the SPAD was 7.1 higher; Compared with conventional treatment, the number of flowers per plant increased by 36.6, and the fresh weight per flower increased by 0.07 g. In terms of quality, the content of luteolin in carbon-based chrysanthemum increased by 0.089%, the content of 3,5-O di caffeoyl quinic acid increased by 0.05%, and the content of total flavonoids with rutin increased by 0.4%. (Refer to Appendix IV).

4. Application of digital technology in agricultural production

In the first half of 2022, the Younong Digital Agriculture Center was established, providing the local cooperatives and family farms where the sub-projects are located with technical solutions for rice production and facilitated, low-cost, and comprehensive social services through the technical service centers and digital platforms.

Implementation progress: In the second half of 2022, on the original basis, the research and development of digital agricultural management system has been basically completed, and patent is being applied for. It will be put into service in 2023 (Appendix V).

The Digital Agriculture Center was committed to using digital technology to help improving rice production management capabilities, making grain planting more efficient and accurate, and ultimately reducing greenhouse gas emissions directly or indirectly. It is expected to operate through the following paths: First, conducting precise inputs of production factors in the process of grain planting to reduce emissions. Through remote sensing technology and ground and

underground data collection system, soil fertility are accurately monitored, thus to guide farmers to apply fertilizer accurately according to the soil testing formula and avoid the abuse of chemical fertilizer; Around-the-clock monitoring and analysis of pests and diseases are carried out with field sensing devices, so as to reasonably arrange the use of UAV to manage pests and diseases, timely and accurately apply pesticides, and avoid excessive application of pesticides. Second, saving the energy and reducing emissions of agricultural machinery in the process of grain planting. Scientifically plan the best route for agricultural machinery operations through digital technology, and use tools such as Beidou satellites to guide agricultural machinery to operate accurately and efficiently in the field to reduce fuel consumption.

5. Agricultural products transportation

In the second half of 2022, the agricultural products produced by the sub-projects were mainly sold in Huangshan City and Hefei City, Anhui Province. The sales model was in cooperation with supermarkets or online sales, and there was no self-built point of sale. The sales in the store were mainly transported by logistics, and the online sales were transported by express companies.

The main activities were the production and transportation of bagged rice. The impact on the environment was mainly noise and some waste, and the negative impact on the environment was negligible. Therefore, they fall under category C in the environmental impact assessment.

Mitigation measures: (i) Adopt low-noise equipment and processes, strictly control production time, and prohibit production at night; (ii) Classify and promptly remove and centrally dispose of waste generated from processing activities and procurement; (iii) Pack the product well in accordance with road transportation regulations during transportation.

6. Use of agricultural machinery and equipment

In the second half of 2022, the sub-projects used automatic seeders, high-speed rice transplanters, tractors, and unmanned plant protection machines to provide mechanized services.

Mitigation measures: in the second half of 2022, (1) the use of herbicides was reduced through rice transplanter transplanting; (2) The use of UAV for plant protection reduced the amount of pesticides; (3) Agricultural machinery and equipment all used National 5 emission standard agricultural machinery; (4) By providing unified services to intensive land, it greatly improved the working efficiency of agricultural machinery, alleviated and avoided the problem of low efficiency of small-scale farmers in mountainous areas, and reduced fuel consumption; (5) The agricultural machinery equipment were kept by the agricultural machinery operator or stored in the existing warehouse of the sub-project enterprise, and no new warehouse was built.

7. Internal Management of sub-project Enterprises

In the second half of 2022, the sub-project continued to carry out internal inspections, including the inspection of production workshop, warehouse, packaging workshop and other daily operations. Through the inspection, the standardization of the operation of the staff of the sub-project and the awareness of production safety were guaranteed. The subproject were also

irregularly checked by Yixian County Agriculture and Rural Bureau, Huangshan Agriculture and Rural Bureau and other competent departments. (Refer to Appendix VI)

The inspection contents include the following measures: 1) Regular inspection of the production environment, air purification conditions, and facility safety; 2) Check whether agricultural machinery operators and employees have behaviors that damage the environment and violate environmental safeguard policies.

C. Social Safeguard Measures

According to the requirements of ESMS, the implementing agency evaluated and inspected the sub-projects to know about the social impacts on surrounding communities and the public, including land acquisition, involuntary resettlement, ethnic minorities and land-use right transfer.

1. Land Acquisition and Resettlement

In the second half of 2022, the content of the sub-project did not involve land acquisition and involuntary resettlement as defined in the ADB safeguard policy statement and the project ESMS; There was no residential relocation and economic loss due to land acquisition or involuntary resettlement. Therefore, the land acquisition and resettlement issues belong to Category C.

2. Transfer of Land Use Rights

In the second half of 2022, the sub-project did not involve the transfer of land use rights. Therefore, the issue of land use right transfer belongs to Class C.

3. Minority

As required by the policy, the assessment of minority impacts should include the project's impact on the minority and the vulnerability of their communities. According to ADB's Safeguard Policy Statement and ESMS, the sub-project activities do not involve any ethnic minority issues, so the impacts on ethnic minorities are all in Category C (no monitoring required).

In the second half of 2022, none of the farmlands served by the sub-projects were located in ethnic minority areas, so there was no ethnic minority issue involved.

4. Society and Gender

In the second half of 2022, the sub-project carried out 8 trainings for enterprise managers and grass-roots staff. The training content included production safety, digital agriculture, planting technology, and agricultural machinery operation. In addition, in order to broaden the vision of the sub-project implementers to better develop cooperation with universities and enrich agricultural expertise, the sub-project organized personnel 4 visits in other cities to learn about new technologies for agricultural development.(Refer to Appendix VII)

According to the implementation target of ESMS, the sub-project trained 177 employees, of whom 36 were women, accounting for 20%. During the training process, the sub-project provided

more training opportunities for women. The trained technicians include crop technicians, agricultural machinery technicians, and poor farmers.

These trainings helped women build their capacity for self-development and risk resistance, and mobilized them to continuously improve themselves, actively reduced poverty and progress, and fostered their participation in social and economic activities.

The sub-project also considered gender in staffing and has increased the number of women staffs.

In the second half of 2022, the sub-project had 55 employees, of which 42% were women; the total number of middle management employees was 14, of which 50% were women.

By implementing socially inclusive development in this project, it brought benefit to minorities, women and the poor.

D. Other monitoring

1. Prohibited Investment Activities

In the second half of 2022, no funds were used to support any of the prohibited activities listed in Appendix 5 of ADB's Safeguard Policy Statement.

2. Information Disclosure

Based on feedback from ADB experts, it is planned to extend the information disclosure period for the second investment project to half a year after the completion of the investment activity. The disclosure is scheduled to begin in February 2023.

E. The Effect of Environmental Monitoring

The establishment and implementation of ESMS in implementing agencies and sub-projects has had a certain impact on the management and the environmental safeguard of sub-project activities, and brought practical benefits to sustainable agricultural development in the project area. The details are as follows:

1. Environmental safeguard measures were implemented to reduce environmental impact. The sub-project has formulated mitigation measures for the possible impact of agricultural production activities on the environment. The environmental impact of agricultural activities is minimized by implementing the principles of internal governance, scientific planting, standardized production, etc.

2. Environmental awareness was enhanced and green development of projects was promoted. As an innovative project of ADB's Huangshan Project, the project adopted the form of funds to support agricultural activities, and the new concept of environmental safeguard has been approved by governments at all levels. During the implementation of the project, through continuous ESMS training, field research, information disclosure and other activities, the

environmental protection awareness of the implementing agency staff, financial personnel and agricultural producers has been improved, thus the green and sustainable development of sub-projects has been promoted.

3. Improved social benefits, and the sub-project won social honors. In the second half of 2022, the first sub-project won a series of social honors. Including: (1) Gold Award awarded by Anhui Straw and Livestock Waste Comprehensive Utilization Industry Expo 2022; (2) *Younong Business Model*, written by the sub-project and the team of Anhui University of Finance and Economics, won the first prize of the 5th "Outstanding Developer" Case Study in 2022 (top 2 in China); (3) Zhang Guozhen, Deputy General Manager of the Sales Department, was awarded the title of "Local Expert" of Rural Huangshan in 2022 by Huangshan Agriculture and Rural Bureau. (Refer to Appendix VIII). The financial and ESMS governance support of the Green Investment Fund for the sub-projects has enabled the sub-projects to get better development opportunities and has achieved certain results.

III. Issues and Solutions Encountered in ESMS Implementation

A. Existing Issues

In the second half of 2022, during the implementation of the project, the implementing agency found that the original approved Environmental and Social Management System could not meet the environmental assessment requirements for other types of projects, such as the ecological and environmental safeguard projects, cultural and tourism projects etc. The main problems encountered were as follows: 1. Different from previous agricultural projects, these new types of projects, such as industrial projects and cultural and tourism projects, have more complex and strict requirements on environmental safeguard and social aspects, and higher professional requirements on staff, so the previous domestic due diligence experience is not very applicable. 2. The audit report, progress report and project evaluation report of the fund project were full of professional terms, which requires high-quality translation, and the current translation ability cannot meet the requirements.

B. Solution

For the above problems, the implementing agency has taken the following actions: 1. Strengthen communication with the municipal project office and project management consulting team, and sought technical support. 2. Apply for the grant from KfW, and hope to obtain technical assistance, training and other ways to strengthen the institutional capacity of implementation.

Regarding the challenges faced in IA's implementing ESMS-related activities, the following suggestions are put forward: (1) Conduct safeguard policy training under GIF supported by LIEC

through active communication with the HPMO; (2) Accelerate KfW grant applications and recruit consultants by grant to support the project implementation, environmental, social and investment aspects under GIF.

Implementing agencies strengthened monitoring through regular reporting and increased monitoring frequency to ensure that various environmental and social safeguards and policies are implemented and ESMS can play its role.

IV Lesson Learned and Next Steps

A. Lesson Learned

During the implementation of this project, the implementing agency has learned and accepted the system principles of ADB's ESMS project, which is conducive to strengthening the handling of environmental and social concerns in the investment operations of the implementing agencies, paying more attention to gender equality, supporting agricultural development and bringing impetus to the development of agriculture, rural areas and farmers. The main experiences are summarized as follows:

1. Providing financial support for the project. The Green Investment Fund can provide sufficient financial support for sub-projects to enhance the development strength of sub-projects and provide financial support for the sustainable development of sub-projects.

2. Creating a green finance model. The use of International Green Finance System Standards (e.g. ESMS) to assess the environmental and social impacts of sub-projects is more precise than previous due diligence assessment. On the basis of financial due diligence, using green evaluation system to supervise the internal control of sub-projects can achieve green and sustainable development.

3. Provide resource integration for sub-projects. The implementing institution gives full play to the advantages of its own resources and partners to introduce comprehensive resources such as talents, financial services and planning guidance to the sub-project, so as to promote the rapid development and growth of the sub-project.

ESMS is very practical, and the experience accumulated in this project from green financing system arrangement, innovative green financing products and business models to sustainable development of green financing can be replicated and expanded in broader scope.

B. Next Steps

1. Continue to track the implementation of ESMS and promote the progress of sub-projects: The implementing agency will continue to provide support to eligible agricultural enterprises according to the fund scheme. And in accordance with the implementation steps of ESMS,

continue to track, monitor and report all sub-projects, and urge sub-projects to continue to pay attention to and implement ESMS in activities to keep project activities sustainable.

2. Continue to strengthen capacity building. In 2023, it is planned to organize at least two trainings for the staff of the implementing agency, especially the environmental and social officers, and the staff of the sub-projects, to apply ESMS steps for screening, identification and post-investment management of sub-projects, and ensure the integration of ESMS in implementing business operations. .

3. Disseminate the experience of GIF pilot. The next step is to actively publicize the achievements and experience sharing of the project activities under GIF through websites, media and other platforms as well as field visits, so that these achievements and experience can be replicated in other domestic regions.

APPENDIX

APPENDIX 1: ESMS SCREENING RECORDS

*APPENDIX 2: INSPECTION RECORDS OF ESMS IMPLEMENTATION
ACTIVITIES*

APPENDIX 3: RICE TEST RESULT

APPENDIX 4: COMPARISON OF TEST RESULTS OF CHRYSANTHEMUM

APPENDIX 5: SCREENSHOT OF DIGITAL AGRICULTURAL SYSTEM

APPENDIX 6: INSPECTION RECORD (PART)

APPENDIX 7: CAPACITY BUILDING ACTIVITIES

APPENDIX 8: PHOTOS OF AWARDED HONORS

APPENDIX 1: ESMS SCREENING RECORDS

| Huangshan Green Investment Fund project database screening records | | | | |
|---|--|---|---|---|
| No. | Project name | Use of funds | Screening process | Current progress |
| 1 | Yixian Younong Ecological Agriculture Co., Ltd. | The improvement of socialized agricultural services model | 1. The first round of screening: comply with national and international laws and regulations; 2. The second round of screening: field visit, pass environmental and social screening, fill in the work sheet of environment, land acquisition, resettlement, land use right transfer, and ethnic minorities; 3. The third round of screening, communication on post-investment environmental safeguard design; 4. The fourth round of screening: evaluation, Class C; 5. The fifth round of screening: collect all domestic environmental assessment documents, and inform the project information disclosure results, post-investment safeguard measures plan and monitoring plan. 6. The sixth round of screening: Signing of investment agreements and implementation of safeguard measures. 7. The seventh round of screening: Monitor projects and submit semi-annual progress reports | Completed investment |
| 2 | Huangshan Tianzhidu Environmental Technology Development Co. LTD | Procurement and installation of 4 molecular sieve runner production lines and 4 low temperature plate SCR denitration catalyst production lines | 1. The first round of screening: comply with national and international laws and regulations; 2. The second round of screening: field visit, pass environmental and social screening, fill in the work sheet of environment, land acquisition, resettlement, land use right transfer, and ethnic minorities; 3. The third round of screening, communication on post-investment environmental safeguard design; 4. The fourth round of screening: evaluation, Class C; 5. The fifth round of screening: collect all domestic environmental assessment documents, and inform the project information disclosure results, post-investment safeguard measures plan and monitoring plan. | No objection opinion from ADB has been obtained |
| 3 | Huangshan Guoda Ecological Agriculture Technology Co., LTD | Construction of 1 organic fertilizer production plant and its supporting facilities and equipment. | First round screening: There are violations of China's environmental policies to be resolved. | Application rejected |
| 4 | She County Tourism Development Co., LTD | Construction of ecological parking lot. | 1. The first round of screening: comply with national and international laws and regulations; 2. The second round of screening: field visit. noticed the | Application terminated |

| | | | | |
|---|---|---|--|--|
| | | | project construction has been completed, so no capital expenditure is needed. | |
| 5 | Huangshan Secret Scenery Tourism Development Co., LTD | The upgrading of the business form and mode of leisure eco-tourism resort | 1. The first round of screening: comply with national and international laws and regulations; 2. The second round of screening: field visit, pass environmental and social screening, fill in the work sheet of environment, land acquisition, resettlement, land use right transfer, and ethnic minorities. | In the progress of the second round of screening |

APPENDIX 2: INSPECTION RECORDS OF ESMS IMPLEMENTATION ACTIVITIES

Reporting period: July 1 to December 31, 2022

| No. | Location | Date | Subject | Inspector |
|-----|--|----------------|---|--|
| 1 | Xinhua Township, Huangshan District | 2022.8.2 | To inspect the specific implementation plan of the popularization of Younong mode in Huangshan District | Vice President Wang Xu, General Manager Zong Wei, Project Manager Guo Man and Project Manager Song Jianbin |
| 2 | Shangshan Town, Xiuning County | 2022.11.1 7 | To inspect the specific implementation plan of the popularization of Younong mode in Xiuning County | General manager Zong Wei, social commissioner Jiang Junyu of Credit Investment Group |



Photos of the site inspection

APPENDIX 3: RICE TEST RESULT

安徽省公众检验研究院有限公司
检验报告Inspection report of Anhui Public
Inspection Research Institute Co., LTD

No:FS2022080209

共 4 页 第 1 页

| | | | | |
|---------|--|--------|-------------------------|--------|
| 样品名称 | 黄山优质大米 | | 规格型号 | 10kg/袋 |
| 生产日期 | 2022-07-16 | | 商标 | 有农 |
| 生产批号 | / | | 质量等级或加工工艺 | 籼米 |
| 样品数量 | 2袋 | | 检验类别 | 委托检验 |
| 委托单位名称 | 黟县有农生态农业有限公司 | | | |
| 委托单位地址 | 安徽省黄山市黟县五东殿工业园 | | | |
| 标称生产者名称 | 黟县有农生态农业有限公司 | | | |
| 标称生产者地址 | 安徽省黄山市黟县五东殿工业园 | | | |
| 执行标准 | NY/T 419-2021 | | 样品状态 | 固体 |
| 样品接收日期 | 2022-08-16 | 样品检测日期 | 2022-08-16 - 2022-09-08 | |
| 检验依据 | 见附页 | 检验项目 | 共 44 项(见附页) | |
| 检验结论 | <p>该样品按照NY/T 419-2021及JJF 1070-2005标准检验, 所检项目均合格。</p> <p style="text-align: right;">  签发日期: 2022-09-06 检验检测专用章 </p> | | | |
| 备 注 | 样品和信息均由客户提供 | | | |

主检: 金双湖

审核: 张洪远

批准: 朱磊磊

APPENDIX 4: COMPARISON OF TEST RESULTS OF CHRYSANTHEMUM



报告编号: FT-20221214012-2

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测试结果:

| 序号 | 测试项目 | 测试结果 | 技术指标 | 单位 | 测试方法/仪器 |
|----|--|-------|------------------------|----|---------------------------|
| 1 | 绿原酸 (C ₁₆ H ₁₈ O ₉) | 0.41 | 本品按干燥品计算, 应不得少于 0.20% | % | 《中国药典》2020 年版 一部 菊花含量测定 |
| 2 | 木犀草苷 (C ₂₁ H ₂₀ O ₁₁) | 0.483 | 本品按干燥品计算, 应不得少于 0.080% | % | 《中国药典》2020 年版 一部 菊花含量测定 |
| 3 | 3,5-O-二咖啡酰基奎宁酸 (C ₂₅ H ₂₄ O ₁₂) | 1.07 | 本品按干燥品计算, 应不得少于 0.70% | % | 《中国药典》2020 年版 一部 菊花含量测定 |
| 4 | 总黄酮以芦丁 (C ₂₇ H ₃₀ O ₁₆)计 | 9.4 | 本品按干燥品计算, 应不得少于 8.0% | % | 参照《中国药典》2020 年版 一部 槐花含量测定 |

报告结束

Test results of organic fertilizer planting chrysanthemum



报告编号: FT-20221214012-1

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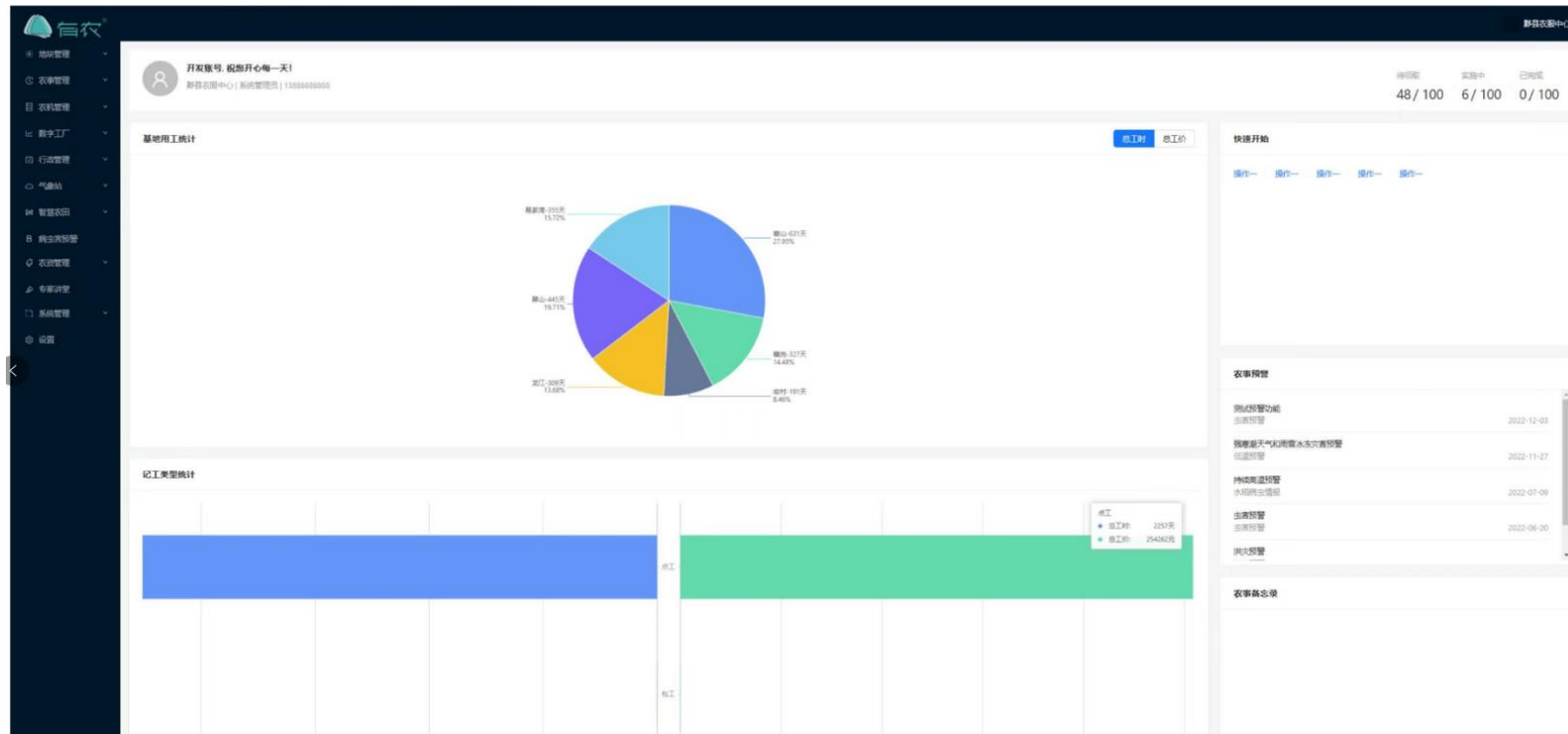
测试结果:

| 序号 | 测试项目 | 测试结果 | 技术指标 | 单位 | 测试方法/仪器 |
|----|--|-------|------------------------|----|---------------------------|
| 1 | 绿原酸 (C ₁₆ H ₁₈ O ₉) | 0.43 | 本品按干燥品计算, 应不得少于 0.20% | % | 《中国药典》2020 年版 一部 菊花含量测定 |
| 2 | 木犀草苷 (C ₂₁ H ₂₀ O ₁₁) | 0.394 | 本品按干燥品计算, 应不得少于 0.080% | % | 《中国药典》2020 年版 一部 菊花含量测定 |
| 3 | 3,5-O-二咖啡酰基奎宁酸 (C ₂₅ H ₂₄ O ₁₂) | 1.02 | 本品按干燥品计算, 应不得少于 0.70% | % | 《中国药典》2020 年版 一部 菊花含量测定 |
| 4 | 总黄酮以芦丁 (C ₂₇ H ₃₀ O ₁₆)计 | 9.0 | 本品按干燥品计算, 应不得少于 8.0% | % | 参照《中国药典》2020 年版 一部 槐花含量测定 |

报告结束

Test results of common fertilizer planting chrysanthemum

APPENDIX 5: SCREENSHOT OF DIGITAL AGRICULTURAL SYSTEM



APPENDIX 6: INSPECTION RECORD (PART)

Food safety officer in food processing product
production enterprises

粮食加工企业清选岗位食品安全员

《每日食品安全检查记录》 Daily food safety inspection record

食品安全员: 程苗 检查时间: 2022.11.1 检查场所: 筛车间

| 项目 | 检查内容 | 检查情况 | 异常情况说明 | 纠偏措施 |
|--------|--|------|--------|------|
| 清选工艺执行 | 清理、除杂是否符合要求 | 是 | | |
| | 储存过程通风降温是否符合要求 | 是 | | |
| 清选虫害管理 | 防鼠、防虫害装置是否正常使用并有相应检查记录 | 是 | | |
| 生产工艺执行 | 加工生产过程各步骤是否符合工艺要求 | 是 | | |
| 生产设备管理 | 生产设备、设施、加工过程工具定期维护保养并做好记录 | 是 | | |
| 生产环境 | 车间防鼠、防虫害装置正常使用并有相应检查记录, 生产场所无虫害迹象 | 是 | | |
| | 更衣室不与生产场所相通, 工作服与个人服装及其他物品分开放置, 防止交叉污染 | 是 | | |
| 设备设施管理 | 设备、设施是否定期维护保养并做好记录 | 是 | | |
| 人员管理 | 人员健康证管理符合要求, 身体健康状况符合规定 | 是 | | |

Food safety officer in inspection position
检验岗位食品安全员

《日管控每日食品安全记录》 Food safety records for daily control

食品安全员: 程苗 检查时间: 2022.11.1 检查场所: 筛车间、化验室

| 项目 | 检查内容 | 检查情况 | 异常情况说明 | 纠偏措施 |
|------|---|------|--------|------|
| 人员 | 人员能力是否满足要求 | 是 | | |
| | 人员相关检测是否及时 | 是 | | |
| | 人员相关检测是否准确 | 是 | | |
| | 人员是否按检验标准操作 | 是 | | |
| 仪器 | 仪器设备是否满足检验需求 | 是 | | |
| | 仪器设备是否均可正常有效运行 | 是 | | |
| | 仪器设备是否按要求检定或校准 | 是 | | |
| | 仪器设备是否维护保养 | 是 | | |
| 标准 | 检验相关标准是否为最新有效版本 | 是 | | |
| | 原物料标准样是否最新有效 | 是 | | |
| 试剂 | 试剂是否满足使用需求 | 是 | | |
| | 实验试剂溶液是否按标准配制及有效 | 是 | | |
| | 化学药品是否按相关规定请购、存储、使用 | 是 | | |
| 记录报告 | 相关检验记录是否准确全面 | 是 | | |
| | COA 是否索要及内容全面满足要求 | 是 | | |
| | 报告单是否准确及时 | 是 | | |
| | 相关记录及报告是否按要求归档留存 | 是 | | |
| 特殊食品 | 对出厂的婴幼儿配方食品, 特殊医学用途配方食品是否按照要求批批全项目自行检验, 每年是否对全项目检验能力进行验证。 | 是 | | |
| 异常处理 | 异常是否及时有效及跟踪确认 | 是 | | |

Company internal security inspection records

July 1 to December 31, 2022

Quality and safety unannounced inspection
list of agricultural products

农产品质量安全飞行检查单

Yixian County safety production inspection
original record form
黟县安全生产检查原始记录表

黟县安全生产委员会办公室 2022年12月5日

| | | | |
|-------------|---|------|-------------|
| 被检查单位 | 黟县有农有限公司 | 地址 | 五都工业园B |
| 检查内容 | 安全生产检查 | | |
| 现场情况 | 1. 冬季职工厂区用电、用火安全保障 2. 冬季防冻、防雨雪、车辆交通安全检查 3. 常态化疫情防控措施。 | | |
| 被检查单位 签字 | 程宇 | 联系电话 | 15755998380 |
| 检查组人员 签字 | 王明、唐俊龙、王明 | | |

主体名称: 黟县有农有限公司
 检查时间: 2022年8月5日
 检查地点:

| 序号 | 检查项目 | 检查结果 |
|-----|-------------------------|------|
| 1 | 是否签订承诺书 | 是 |
| 2 | 禁限(停)用清单名录宣传到户情况 | 是 |
| 3 | 是否使用禁限用农药、常规农药使用是否规范 | 是 |
| 4 | 安全生产休药期间隔期和生产档案记录4项制度情况 | 是 |
| 5 | 农产品承诺达标合格证制度执行情况 | 是 |
| 6 | 自律性检测情况 | 自检 |
| 7 | 违法添加金银铂粉情况 | 无 |
| 备注: | | |

受检单位负责人(签名):

检查人员(签名):



Inspection records of Yixian County Work Safety Committee Office and Yixian County Agriculture and Rural Bureau

APPENDIX 7: CAPACITY BUILDING ACTIVITIES

Reporting period: July 1 to December 31, 2022

| No. | Location | Date | Times | Subject | Content of the activity | Number of participants | Number of female participants | Number of male participants | Participant |
|-----------------|-----------------|------------|-------|---|---|------------------------|-------------------------------|-----------------------------|---|
| <i>Training</i> | | | | | | | | | |
| 1 | Younong Company | 2022.7.15 | 1 | Pilot training of national agricultural socialization service innovation. | Guidance on how to carry out the pilot work of national agricultural socialization service innovation. | 6 | 1 | 5 | Middle management of the sub-project |
| 2 | Younong Company | 2022.8.13 | 1 | Operation of rapeseed oil production line | Training on the principles and essentials of the operation of the rapeseed oil production line, microwave press process and the operation of a complete set of equipment | 7 | 2 | 5 | Staff in production support and processing workshops |
| 3 | Younong Company | 2022.8.19 | 1 | The operation of farm machinery | Introducing the general situation of Younong Company and the training activities of new technology promotion and technical exchange of Younong to each farm machine operator; Introducing the function of UAV and its application in agricultural plant protection and the management of digital technology | 70 | 10 | 60 | Farm machine operators from the three districts and four counties of Huangshan City |
| 4 | Younong Company | 2022.9.29 | 1 | Operation of equipment | Introducing the principle and operation essentials of dryer, and how to detect drying moisture | 10 | 0 | 10 | Company farm machine operator |
| 5 | Younong Company | 2022.10.6 | 1 | Younong model training | Promote the release of "Younong Model" and "Typical cases of socialized agricultural services" | 13 | 4 | 7 | Company Staff |
| 6 | Younong Company | 2022.10.11 | 1 | Standardized management | Training on the standardized filling and management of company planting forms | 18 | 6 | 12 | Company Staff |

| | | | | | | | | | |
|----------------------|-----------------|------------|---|--------------------------|--|----|----|----|--|
| 7 | Younong Company | 2022.10.29 | 1 | Intelligent agriculture | Research and development discussion of crawler intelligent fertilizer spreader: Combine agricultural machinery and agronomy with agricultural socialization service mode, conduct independent research and development, and develop towards accurate intelligent agriculture | 9 | 1 | 8 | Staff in the Smart Agriculture and Plantation Department |
| 8 | Younong Company | 2022.11.22 | 1 | Agricultural technology | Younong agricultural service center fine sowing and other advanced agricultural technology, mutual learning exchange | 44 | 12 | 32 | Company staff, Xiuning County Agriculture and rural Bureau |
| <i>Investigation</i> | | | | | | | | | |
| 1 | Hefei | 2022.8.23 | 1 | Straw technology | Participated in the alliance founding conference and Straw Comprehensive Utilization Expo and won the gold medal. | 5 | 2 | 3 | Management of the company |
| 2 | Huainan | 2022.9.14 | 1 | Socialized service model | Learned the great hosting mode of Huainan. | 3 | 1 | 2 | Management of the company |
| 3 | Ma On Shan | 2022.9.26 | 1 | Grain field visit | Field survey of Bowang grain field in Ma 'anshan City | 2 | 1 | 1 | Management of the company |
| 4 | Huainan | 2022.11.10 | 1 | Agricultural model | Investigated the management mode of farm steward in Huainan. | 5 | 2 | 3 | Management of the company |



Photos of training and inspection (part)

APPENDIX 8: PHOTOS OF AWARDED HONORS



Gold Award awarded by Anhui Straw and Livestock Waste Comprehensive Utilization Industry Expo 2022



Case study "Younong Business Model" received First class prize of the 5th "Excellent Developer" in 2022

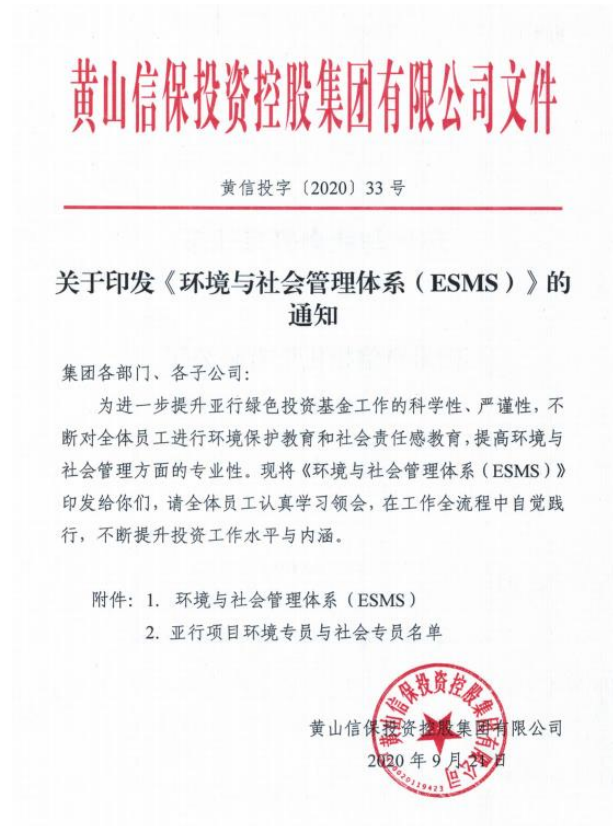
附件

2022 年黄山市乡村“土专家”名单

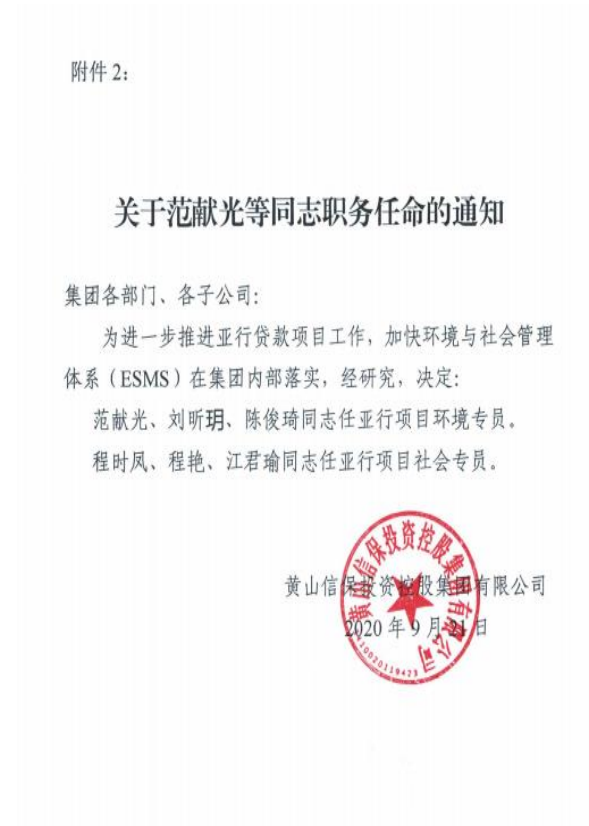
| 序号 | 姓名 | 性别 | 专业领域 | 区县 |
|----|-----|----|-------------------|-----|
| 1 | 胡长育 | 男 | 草莓种植、繁育 | 屯溪区 |
| 2 | 陈贞 | 女 | 稻渔综合种养 | 黄山区 |
| 3 | 桂利权 | 男 | 黄山毛峰种植、新产品研发及三产融合 | 徽州区 |
| 4 | 方秀金 | 男 | 水稻种植、生产加工 | 徽州区 |
| 5 | 汪立春 | 男 | 生猪养殖、废弃物资源化利用 | 歙县 |
| 6 | 方晓华 | 男 | 食用菌培育、生产加工 | 歙县 |
| 7 | 朱国庆 | 男 | 菊花智能烘干设备研发推广 | 休宁县 |
| 8 | 张国珍 | 女 | 优质粮油种植、品种选育推广 | 黟县 |
| 9 | 郑训鹏 | 男 | 高产蛋鸡养殖及育雏期管理 | 祁门县 |
| 10 | 仰志华 | 男 | 中药材黄精加工及种植 | 祁门县 |

List of rural "local experts" in Huangshan City in 2022

APPENDIX 9: THE FORMAL PRESIDENT'S DIRECTIVE



HTIC has issued a formal president's directive to distribute
ESMS for all HTIC's staff



Notice of appointment of Environmental & Social officers