Environmental Monitoring Report

Semestral Report
Project Number: 43024-013
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PRC: Xinjiang Altay Urban Infrastructure and Environment Improvement Project

Prepared by AECOM Asia Company Limited for the Government of Altay Prefecture and the Asian Development Bank.

Environmental Monitoring Report for 2016

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PRC: ADB---XINJIANG ALTAY URBAN INFRASTRUCTURE AND ENVIRONMENT IMPROVEMENT PROJECT

Ⅰ INTRODUCTION

This environmental monitoring report is annual 2016 environmental compliance monitoring" for ADB---XINJIANG ALTAY URBAN INFRASTRUCTURE AND ENVIRONMENT IMPROVEMENT PROJECT which focused on the second half of the year for annual environmental Management and monitoring. It is prepared by the Project Management Office (PMO) with the assistance of AECOM which has been providing consulting services to PMO. In this Report, we briefly provide (i) a review of the environmental procedures and compliance with environmental regulations, (ii) the environmental institutional structure and responsibilities, (iii) mitigation measures undertaken to minimize adverse environmental impacts arising from the construction of the Project facilities, (iv) environment monitoring results and (v)conclusions and suggestions.

The purpose of "environmental compliance monitoring" is to ensure that all the sub-projects and the project as a whole comply with the environmental and related safeguards policies and requirements of the People's Republic of China (PRC) and the Asian Development Bank (ADB).

Ⅱ INSTITUTIONAL SETUP AND RESPONSIBILITIES FOR EMP IMPLEMENTATION AND SUPERVISION

Institutional responsibilities for environmental management

The Xinjiang Uygur Autonomous Region government is the EA and has established a project leading group and a project management office (PMO). The PMO has overall responsibility delegated by the EA for supervising the implementation of mitigation measures and reporting to ADB. The sub-project counties have also established their own PMOs to coordinate and monitor the implementation of the sub-projects and the relevant environmental management for the construction activities for 2015.

In line with the requirements of the agreed EMP, the PMO and local PMOs has established its environmental management units (EMU) to coordinate and supervise EMP implementation, guide and coordinate the departmental and sub-projects' practices in environmental dimensions, liaise with governmental authorities in charge of environmental affairs, disclose relevant information, interact and communicate with communities on construction activities implemented in 2016.

The PMO, the IAs and the contractors have each nominated dedicated, trained, and qualified staff to undertake environmental management activities and ensure effective EMP implementation in 2016.

Construction contractors are responsible for implementing mitigation measures during construction. The IAs are responsible for arranging environmental monitoring reviews and responding to any adverse impact beyond that foreseen in the EIAs.

Incorporation of Environmental Requirements into Project Contractual Arrangements

The Project Environment Management Plan's (EMP's) primary purpose is to ensure the environmental requirements, identified during and following the Planning/Design Phase, are implemented and effectively managed during a project's life cycle. In addition to the incorporation of environmental requirements into the project

specifications in the bidding document, the environmental requirements are part of the contractual requirements for the project. For example, the environmental requirements are specified in the special conditions of the contract with contractors as follows:

The Contractors are conducting: (a) establish the operation system of environmental impact management; (b) closely monitor the environmental impact during the construction and take mitigation measures as needed; and (c) arrange the budget to ensure the implementation of mitigation measures. The contractor will provide the internal semi-annual environmental monitoring and mitigation measures report to the employer.

The Contractor are obeying relevant laws and regulations during construction on environmental pollution control issued by the relevant government agencies (environmental protection bureaus) or local authorities and shall adopt necessary measures to prevent air pollution from dust and exhaust gases and to perform the construction activities in civilized manner.

Ⅲ. Legal Requirements

Review of the environmental procedures has been carried out throughout the project processing. **Table 1** provides a list of the applicable environmental laws and regulations of the PRC and environmental policies and regulations of ADB with which the design, construction and operation of all the SPWPP project facilities should be comply.

Table 1 Relevant environmental Laws, Standards and Regulations

CATEGORY	ENVIRONMENTAL LAWS, STANDARDS AND REGULATIONS
National	Environmental Protection Law of the PRC, 2015
	Environmental Impact Assessment Law of PRC, 1 Sep 2003
	Environmental protection Management Regulations for Construction Projects, 1 Dec 2005
	Notice to Strengthen the Environmental Impact Assessment and Management of Construction Projects Financed by Loan from International Financial Organizations, 21 Jun 1993
Water and Wastewater	Water Law of the PRC, 1 Oct 2002
	Water Pollution Prevention and Control Law of the PRC, 28 Feb 2008
	Integrated Wastewater Discharge Standard (GB8978-1996)
	Environmental Quality Standard for Surface water (GB3838-2002)
	Quality Standard for groundwater (GB14848-93)
Land and Soil Resources	Land Management Law of the PRC, 28 Aug 2004
	Conservation of Water and Soil Law of the PRC, 29 Jun 1991
Solid Waste Management	Solid Waste Environmental Pollution Prevention and control Law of the PRC, 1 Apr 2005
Air	Air Pollution Prevention and control Law of the PRC, Sep 2000
	Integrated Emission standard of Air pollutions (GB14554-93)
	Ambient Air Quality Standard (GB3095-1996)
Cultural Relic Protection	Law of the PRC on Protection of Cultural Relics, 28 Oct 2002
Local	Heilongjiang Provincial Wetlands protection Regulations, 2003
	Heilongjiang Provincial Nature Reserve Management Regulations, 1996
ADB	SPS , ADB, Manila, 2010

CATEGORY	ENVIRONMENTAL LAWS, STANDARDS AND REGULATIONS
	Environmental Considerations in ADB Operations, ADB, Manila, Sep 2006
	Environmental Assessment Guidelines, ADB, Manila, May 2003

Besides, some other relevant documents should also be complied with during project implementation. These documents are summarized in **Table 2**.

Table 2. Other Applicable Documents

Category	Document
Domestic	Environmental Impact Assessment (EIA) Reports and EPB's comments
	Soil and Water Conservation Program
	Preliminary and detailed design reports
	Construction bidding documents
	Construction contracts
ADB	Report and Recommendation of the President to the Board of Directors (RRP)
	Loan Agreement (LA)
	Project Agreement (PA)
	Project Administration Memorandum (PAM)
	Summary Environmental Impact Assessment (SEIA)

Ⅳ. Implementation progress

Implementation progress of Buerjin Component:
Water Supply component: The construction of this component have been completed.
Wastewater component: The construction of this component have been completed.
Road component: The construction of this component have been completed.
Solid waste component: The construction of this component have been completed.
Without civil works conducted in 2016.

Implementation progress of Fuhai Component:
Water Supply component: The construction of this component have been completed.
Wastewater component: The construction of this component have been completed.
Road component: The construction of this component have been completed.
Solid waste component: The construction of this component have been completed.
Without civil works conducted in 2016.

Implementation progress of Habahe Component:
Road component: The construction of this component have been completed.
Water Supply component: The construction of this component have been completed.
Central heating component: The construction of this component have been completed.
Wastewater component: Sewage treatment plant is nearly completed civil works.
Solid waste component , The construction of this component is nearly completed civil works.
Where are a few small-scale civil works conducted in 2016.

Implementation progress of Jimunai Component:
Road component: The construction of this component have been completed.
Wastewater component: Sewage treatment plant is nearly completed civil works.
Solid waste component: The construction of this component is nearly completed civil works.
Water Supply component: The construction of this component have been completed.

Where are a few small-scale civil works conducted in 2016.

Implementation progress of Qinghe Component:
Road component: The construction of this component have been completed.
Wastewater component: Sewage treatment plant is nearly completed civil works.
Solid waste component: The construction of this component is nearly completed civil works.
Central heating component: The construction of this component have been completed.
Water Supply component: The construction of this component have been completed.
Where are a few small-scale civil works conducted in 2016.

Ⅴ. Environmental Management

Environmental management system has been established at each of the implementation agencies for enforcement of environmental management. In designated responsible person and construction contracts, the some measures of environmental management system employed. At construction sites, waste-water emissions, noise control, dust and exhaust control, and solid waste treatment are included. AECOM's environmental expert assistance to ensure effective implementation of the Environmental Management Plan (EMP) and requires the implementation of mitigation measures.

Major construction activities have been started for five sub-projects. Some of the counties have completed the civil works. The environmental management activities during project construction were satisfactory. During this reporting period, the execution of the plan for 2016 was satisfactory.

APMO and the loan consultant confirmed that these subprojects have followed the environmental management plans. The negative environmental impacts during construction phase have been minimized by the mitigation measures. There is not major environmental complains being filed by the public in 2016 annual stage of the project implementation.

According to internal monitoring and verification of the construction site impact mitigation measures in 2016, the environmental impact mitigation measures of each subproject are summarized. **Table 3** provides a summary of the environmental management status and mitigation implementations for all the sub-projects.

Table 3 Summary of Environmental Impact Mitigation Measures conducted in 2016

Component civil work	Mitigation Measures for air emission and noise impact	Mitigation Measures for wastewater and solid waste	Soil and water protection and ecological protection
Buerjin Components Water Supply component Wastewater component Road component Solid waste component	The construction site have been closed where necessary and be sprayed with water when necessary. Covering measures or closed vehicles have been used for transportation, and the transportation route have been properly selected and the speed of vehicles were limited. Vehicles delivering granular or fine materials to the sites must be covered. Water were sprayed on construction sites and access roads where or when necessary.. Excellent maintenance to make the exhaust discharge of automobiles and machineries meet the national standard. The construction equipment have been well maintained and properly operated so that the equipment noise is minimized. The construction activities were rationally scheduled and had been arranged in daytime. No construction activity is allowed during 22:00~6:00. The temporary sound-proof fence had been set up if	Strip and stockpile topsoil, build retaining walls where necessary before dumping. Provide temporary detention ponds or containment to control silt runoff . Construct intercepting ditches and chutes to prevent outside runoff entering disposal sites, and divert runoff from sites to existing drainage or ponds. WWTP and sewer networks construction were in close coordination and no impact to the operation of WWTP. There is no substandard effluent discharge. Multi-compartment collection bins have been provided on site. The construction waste may be sorted into two categories—recycled and un-recycled wastes. The recycled wastes have been recycled where or when needed and the un-recycled wastes were collected and transported to sanitary landfill.	Soil erosion protection measures were implemented at each site, fully complying with the measures defined in this EMP. Intercepting ditches and chutes were built to prevent outside runoff from entering disposal sites. Disposal and borrow sites were rehabilitated into grassland, or woodland, or farmland after the construction activities completed. Strengthened supervision and management; enhanced operation monitoring; there is no sewer leaking or bursting up to now; developed emergency response plan; procured pipe maintenance vehicle and equipment. Greening was being organized in the plant. the earth is piled together and covered with straw mat; Greening was conducted for the completed civil works Sewer pipes of the planned construction and temp storage site of solid waste are carried out anti seepage; therefore, the planned engineering has no impact to the shallow ground water.

	necessary. The transportation route should be carefully selected to avoid any residential area. Provisions of site enclosure; watering dusty roads; covering or enclosing transportation; routing better and setting speed limited; covering construction materials; reducing construction material storage time emission from the vehicle and construction machinery Periodical maintenance to keep vehicle and machinery emission meet all required standards. The emission from the vehicle and construction machinery in the site meets all required standards.	Installed berm and cover device, timely cover after the landfill. Enclosure transportation was implemented where or when needed. The quantity of leachate was small. Emergency response plan was developed due to current small volume of solid waste, no significant methane release; methane collection pipes are not installed. Use construction waste as current waste cover. There was no problem of back fill material excavation. Provide site enclosures to runoff; or designated storm drains, or temp storage tanks Wastewater treatment systems was used and properly maintained on site (e.g. desilting tank) Construction wastewater and domestic wastewater discharged to sewer systems (if possible), or are on-site treatment facilities provided to ensure compliance with effluent discharge standard there are no any wastewater discharged to the	Excess soil tested for safe disposal were reused for landscaping where necessary; if not then disposed to landfill; construct berm around soil temporary storage areas; Constructions were carried out in enclosed the construction site. set up cofferdam and designated drains to reduce the soil erosion in rainy season. The ecological environment restoration has been carried out for the completed waste solid treatment subproject and water supply subproject, and the vegetation restoration result is at good condition and reduced the soil erosion.

		city storm drains	
Fuhai Components Wastewater component Road component Heating component Solid waste component	The construction site have been closed and be sprayed with water at regular time. Covering measures or closed vehicles have been used for transportation, and the transportation route have been properly selected and the speed of vehicles was limited. Vehicles delivering granular or fine materials to the sites must be covered. Water was sprayed on construction sites and access roads. Such cleaning must be completed regularly. Excellent maintenance to make the exhaust discharge of automobiles and machineries met the national standard. The construction equipment was well maintained and properly operated so that the equipment noise was minimized. The construction activities were rationally scheduled and have been arranged in daytime where necessary. No construction activity was allowed during 22:00~6:00 where necessary. The temporary sound-proof fence were set up if necessary. The transportation	Strip and stockpile topsoil, build retaining walls where necessary before dumping. Provided temporary detention ponds or containment to control silt runoff. Construct intercepting ditches and chutes to prevented outside runoff entering disposal sites, and divert runoff from sites to existing drainage or ponds. Multi-compartment collection bins were provided on site. The construction waste may be sorted into two categories—recycled and un-recycled wastes. The recycled wastes were recycled and the un-recycled wastes were collected and transported to urban sanitary landfill. Installed berm and cover device, timely covered after the landfill. Enclosure transportation was implemented. The quantity of leachate is small. Emergency response plan is developed due to current small volume of solid waste, no significant methane release; methane collection pipes are not installed. Use construction waste as current waste cover.	Before excavation of clay, the top humus soil was stripped, compacted and stored at a nearby place for temporary deposit. The top soil have been reused to reinstate the borrow areas. It was proposed that when excavation of the clay was complete, the land was restored and vegetation to be replanted. Around the stockpile area an intercepting drain has been excavated in order to prevent hill water from flowing into the borrow area and washing the slope excavated. It has been seen from site visits that the bits have been filled with water coming from rain water or infiltrating from hill slope. Few temporary barriers have been built for the temporary waste disposal areas to prevent erosion. More water and soil conservation works or measures were conducted for these areas to prevent potential risk for soil erosion upon arrival of the next rain season especially. In order to reduce soil erosion, the constructors gave first priority to utilize existing roads for transportation and minimized building new temporary ones. Soil erosion protection measures were implemented at each site, fully complying with the measures defined in this

	route should be carefully selected to avoid any residential area. Provisions of site enclosure; watering dusty roads; covering or enclosing transportation; routing better and setting speed limit; covering construction materials; reducing construction material storage time Periodical maintenance to keep vehicle and machinery emission met all required standards. The emission from the vehicle and construction machinery in the site met all required standards. Dusty materials were shielded or covered and the vehicles were cleaned before leaving the construction sites to reduce air pollution. Construction was conducted in hilly and valley sites and the use of noisy machinery is avoided as much as possible. Construction activities are scheduled to minimize disturbance to residents rest time. Exhaust gas control: In order to control	There was no problem of backfill material excavation. Provide site enclosures to runoff; designated storm drains, temp storage tanks wastewater treatment systems was used and properly maintained on site (e.g. desilting tank) construction wastewater and domestic wastewater discharged to sewer systems (if possible), or were on-site treatment facilities provided to ensure compliance with effluent discharge standard WWTP and sewer networks construction were in close coordination and no impact to the operation of WWTP. There was no substandard effluent discharge. there were no any wastewater discharged to the city storm drains	EMP. Intercepting ditches and chutes were built to prevent outside runoff from entering disposal sites. Disposal and borrow sites were rehabilitated into grassland, woodland, or farmland after closing. Strengthened supervision and management; enhanced operation monitoring; there was no sewer leaking or bursting up to now; developed emergency response plan; procured pipe maintenance vehicle and equipment. Greening is being organized in the plant. the earth is piled together and covered with strawmat; wastewater was collected and treated properly. Sewer pipes of the planned construction and temp storage site of solid waste are carried out antiseepage; therefore, the conducted engineering has no impact to the shallow ground water. Excess soil tested for safe disposal and reused for landscaping; if not then disposed to landfill; construct berm around soil temporary storage areas;

	machinery and vehicles' exhaust gas, construction machinery and vehicles were kept in good condition and only good quality fuel and oil were used. The vehicles were also installed with purification apparatus to treat exhaust gases.		rehabilitate all previously used site to original conditions; excess soil to landfill for final disposal; Construction was carried out in enclosed the construction site. set up cofferdam and designated drains to reduce the soil erosion in rainy season. The ecological environment restoration has been carried out for the completed road, and the vegetation restoration result is at good condition The ecological environment restoration has been carried out for the completed waste solid treatment subproject and central heating subproject, and the vegetation restoration result is at good condition and reduced the soil erosion.
Habahe Component Water Supply component Wastewater component Road component Heating component Solid waste component	The construction site were closed and be sprayed with water at regular time. Covering measures or closed vehicles were used for transportation, and the transportation route were properly selected and the speed of vehicles was limited. Vehicles delivering granular or fine materials to the sites have been covered. Water were sprayed on construction sites and access roads. Such cleaning must be completed regularly.	Strip and stockpile topsoil, build retaining walls where necessary before dumping. Provided temporary detention ponds or containment to control silt runoff. Construct intercepting ditches and chutes to prevented outside runoff entering disposal sites, and divert runoff from sites to existing drainage or ponds. Multi-compartment collection bins were provided on site. The construction waste had been	Soil erosion protection measures were implemented at each site, fully complying with the measures defined in this EMP. Intercepting ditches and chutes were built to prevent outside runoff from entering disposal sites. Disposal and borrow sites were rehabilitated into grassland, woodland, or farmland after closing. Strengthened supervision and management; enhanced operation monitoring; there was no sewer leaking or bursting up to now; developed emergency response plan;

	Excellent maintenance to make the exhaust discharge of automobiles and machineries met the national standard. The construction equipment was well maintained and properly operated so that the equipment noise is minimized. The construction activities were rationally scheduled and should be arranged in daytime. No construction activity was allowed during 22:00~6:00. The temporary sound-proof fence have been set up if necessary. The transportation route were carefully selected to avoid any residential area. Provisions of site enclosure; watering dusty roads; covering or enclosing transportation; routing better and setting speed limited; covering construction materials; reducing construction material storage time Periodical maintenance to keep vehicle and machinery emission met all required standards. The emission from the vehicle and construction machinery in the site met all required standards.	sorted into two categories—recycled and un-recycled wastes. The recycled wastes have been recycled and the un-recycled wastes were collected and transported to urban sanitary landfill. WWTP and sewer networks construction were in close coordination and no impact to the operation of WWTP. There was no substandard effluent discharge. Installed berm and cover device, timely covered after the landfill. Enclosure transportation was implemented. The quantity of leachate was small. Emergency response plan was developed due to current small volume of solid waste, no significant methane release; Use construction waste as current waste cover. There was no problem of backfill material excavation. Provided site enclosures to runoff; designated storm drains, temp storage tanks	procured pipe maintenance vehicle and equipment. Greening is being organized in the plant. the earth was piled together and covered with strawmat; wastewater was collected and treated properly. Sewer pipes of the planned construction and temp storage site of solid waste was carried out antiseepage; therefore, the conducted engineering has no impact to the shallow ground water. Excess soil tested for safe disposal was reused for landscaping construct berm around soil temporary storage areas; rehabilitated all previously used site to original conditions; excess soil to landfill for final disposal; Construction was carried out in enclosed the construction site. set up cofferdam and designated drains to reduce the soil erosion in rainy season. The ecological environment restoration has been carried out for the completed waste solid treatment subproject and central heating subproject, and the vegetation restoration result is at good condition and reduced the soil erosion.

		wastewater treatment systems had been used and properly maintained on site (e.g. desilting tank) construction wastewater and domestic wastewater discharged to sewer systems (if possible), or were on-site treatment facilities provided to ensure compliance with effluent discharge standard there were no any wastewater discharged to the city storm drains	The ecological environment restoration has been carried out for the completed road, and the vegetation restoration result is at good condition
Jimunai Component Water Supply component Wastewater component Road component Solid waste component Heating component	The construction site had been closed and be sprayed with water at regular time. Covering measures or closed vehicles were used for transportation, and the transportation route was properly selected and the speed of vehicles were limited. Vehicles delivering granular or fine materials to the sites had been covered. Water was sprayed on construction sites and access roads. Such cleaning were completed regularly. Excellent maintenance to make the exhaust discharge of automobiles and machineries	Implemented according to the EMP Internal Environmental Monitoring have been conducted during the construction period at the construction site, The results shown the construction activities complied the relevant environmental regulations Strip and stockpile topsoil, build retaining walls where necessary before dumping. Provided temporary detention ponds or containment to control silt runoff. Construct intercepting ditches and chutes to prevent outside runoff entering disposal sites, and divert runoff from sites to existing drainage	Soil erosion protection measures were implemented at each site, fully complying with the measures defined in this EMP. Intercepting ditches and chutes were built to prevent outside runoff from entering disposal sites. Disposal and borrow sites were rehabilitated into grassland, woodland, or farmland after closing. Strengthened supervision and management; enhanced operation monitoring; there was no sewer leaking or bursting up to now; developed emergency response plan; procured pipe maintenance vehicle and equipment. Greening was being organized in the construction sites

	met the national standard. The construction equipment was well maintained and properly operated so that the equipment noise was minimized. The construction activities were rationally scheduled and should be arranged in daytime. No construction activity was allowed during 22:00~6:00. The temporary sound-proof fence had been set up if necessary. The transportation route should be carefully selected to avoid any residential area. Provisions of site enclosure; watering dusty roads; covering or enclosing transportation; routing better and setting speed limited; covering construction materials; reducing construction material storage time Periodical maintenance to keep vehicle and machinery emission met all required standards. The emission from the vehicle and construction machinery in the site met all	or ponds. Multi-compartment collection bins were provided on site. The construction wastes had been sorted into two categories—recycled and un-recycled wastes. The recycled wastes were recycled and the un-recycled wastes were collected and transported to urban sanitary landfill. Installed berm and cover device, timely cover after the landfill. Enclosure transportation is implemented. The quantity of leachate was small. Emergency response plan was developed due to current small volume of solid waste, no significant methane release; methane collection pipes were not installed. Provided site enclosures to runoff; designated storm drains, temp storage tanks wastewater treatment systems have been used and properly maintained on site (e.g. desilting tank) construction wastewater and domestic wastewater discharged to sewer systems (if possible), or were on-site treatment facilities provided to ensure compliance with effluent discharge standard	the earth was piled together and covered with strawmat; wastewater was collected and treated properly. Sewer pipes of the planned construction and temp storage site of solid waste were carried out antiseepage; therefore, the planned engineering has no impact to the shallow ground water. Excess soil tested for safe disposal have been reused for landscaping; if not then disposed to landfill; construct berm around soil temporary storage areas; rehabilitated all previously used site to original conditions; excess soil to landfill for final disposal; Construction was carried out in enclosed the construction site. set up cofferdam and designated drains to reduce the soil erosion in rainy season. The ecological environment restoration has been carried out for the completed road, and the vegetation restoration result is at good condition The ecological environment restoration has been carried out for the completed waste solid treatment subproject and water supply subproject, and the vegetation restoration

	required standards.	there was no any wastewater discharged to the city storm drains	result is at good condition and reduced the soil erosion.
Qinghe Component Water Supply component Wastewater component Road component Solid waste component Heating component	The construction site had been closed and be sprayed with water at regular time. Covering measures or closed vehicles had been used for transportation, and the transportation route was properly selected and the speed of vehicles was limited. Vehicles delivering granular or fine materials to the sites have been covered. Water was sprayed on construction sites and access roads. Such cleaning must be completed regularly. Excellent maintenance to make the exhaust discharge of automobiles and machineries met the national standard. The construction equipment was well maintained and properly operated so that the equipment noise was minimized. The construction activities were rationally scheduled and had been arranged in daytime. No construction activity was allowed during 22:00~6:00. The temporary sound-proof fence had been set up if necessary. The transportation route had been carefully selected to avoid any	Strip and stockpile topsoil, build retaining walls where necessary before dumping. Provide temporary detention ponds or containment to control silt runoff. Construct intercepting ditches and chutes to prevent outside runoff entering disposal sites, and divert runoff from sites to existing drainage or ponds. WWTP and sewer networks construction was in close coordination and no impact to the operation of WWTP. There was no substandard effluent discharge. Multi-compartment collection bins were provided on site. The construction waste was sorted into two categories—recycled and un-recycled wastes. The recycled wastes were recycled and the un-recycled wastes were collected and transported to urban sanitary landfill. Installed berm and cover device, timely covered after the landfill. Enclosure transportation is	Soil erosion protection measures were implemented at each site, fully complying with the measures defined in this EMP. Intercepting ditches and chutes were built to prevent outside runoff from entering disposal sites. Disposal and borrow sites were rehabilitated into grassland, woodland, or farmland after closing. Strengthened supervision and management; enhanced operation monitoring; there was no sewer leaking or bursting up to now; developed emergency response plan; procured pipe maintenance vehicle and equipment. Greening was organized in the plant. the earth was piled together and covered with strawmat; wastewater was collected and treated properly. Sewer pipes of the planned construction and temp storage site of solid waste are carried out antiseepage; therefore, the planned engineering has no impact to the shallow ground water. Excess soil tested for safe disposal were reused for landscaping; if not thendisposed to landfill; construct berm

	residential area. Provisions of site enclosure; watering dusty roads; covering or enclosing transportation; routing better and setting speed limited; covering construction materials; reducing construction material storage time Periodical maintenance to keep vehicle and machinery emission met all required standards.	implemented. The quantity of leachate was small. Emergency response plan was developed due to current small volume of solid waste, no significant methane released; methane collection pipes were not installed. Use construction waste as current waste cover. There was no problem of backfill material excavation. Provided site enclosures to runoff; designated storm drains, temp storage tanks wastewater treatment systems had been used and properly maintained on site (e.g. desilting tank) Construction wastewater and domestic wastewater discharged to sewer systems (if possible), or are on-site treatment facilities provided to ensure compliance with effluent discharge standard there was no any wastewater discharged to the city storm drains	around soil temporary storage areas; Construction was carried out in enclosed the construction site. set up cofferdam and designated drains to reduce the soil erosion in rainy season. The ecological environment restoration has been carried out for the completed waste solid treatment subproject and water supply subproject, and the vegetation restoration result is at good condition and reduced the soil erosion. The ecological environment restoration has been carried out for the completed road, and the vegetation restoration result is at good condition

Ⅵ. Environmental Monitoring

Internal environmental monitoring including routine or periodic inspection of construction waste treatment and implementation of mitigation measures, and include ensuring adequate environmental supervision. AECOM environmental consultant provides training to ensure that contractors and construction supervision company may conduct internal environmental monitoring and preparation of related reports. AECOM environmental consultant provides detailed internal environmental monitoring program and various reports formats and Data. AECOM environmental consultant assist PMO (APMO) compiled regional on the Basis on collected information, AECOM environmental consultant assist to prepare and submit semi-annual environmental reports to the Asian Development Bank.

Internal environmental monitoring including routine or periodic inspection of construction waste treatment and implementation of mitigation measures, and include ensuring adequate environmental supervision. AECOM environmental consultant have provided training to ensure that contractors and construction supervision company may conduct internal environmental monitoring and preparation of related reports. AECOM environmental consultant provides detailed internal environmental monitoring program and various reports formats and Data. This year, part of the county has basically completed the civil engineering. Most of the other counties of the project civil engineering has also been completed, or enter the end of construction phase. The construction site of the focus of environmental management will be on-site ecological restoration and on-site cleaning. All of the Sub-projects PMO submitted the corresponding ecological restoration and site cleanup data.

AECOM environmental consultant assist PMO (APMO) compiled regional on the Basis on collected information, AECOM environmental consultant assist to prepare and submit semi-annual environmental reports to the Asian Development Bank (attached tables).

The external environment monitoring was conducted by a qualified monitoring unit. According to the Environment Monitoring Plan approved in the environmental impact assessment report. the external environment monitoring was conducted by the local environmental monitoring station. Frequency, time, parameters and monitoring procedures specific project area have been listed and carry out the appropriate environmental monitoring at the specified location. The main objective is to obtain external monitoring environmental data in order to understand the construction activity impacts on the surrounding environment and the effectiveness of mitigation in the construction phase.

Some of the sub-projects IAs have provided the 2016 annual external environment monitoring data and related information. The results shown the Sub-project activities

have not produced negative impacts to the nearby environment qualities. The external environment monitoring result for 2015 and the external environment monitoring data and related information for 2016 are included in the 2016 annual report which is submitted to ADB.

APMO has appointed the Altay Prefecture Environmental Monitoring Station (EMS) under EPB and other qualified agency to undertake that the external environmental monitoring exercises involved in the Project,. Some sub-projects have been completed civil engineering construction in 2015, without civil engineering construction activities in 2016, These counties did not carry out 2016 external monitoring. The 2015 environmental quality can be used to represent 2016 environmental quality, if without changes of the environment setting and without pollutant emissions. Detailed external environmental monitoring was conducted from July to Sept. 2016. The external environmental monitoring results were presented as report as **Tables 4-7**.

Table 4 Altay Prefecture Environmental Monitoring Station, Air Quality monitoring (2015-2016)

unit: mg/M^3

Subproject;	**Buerjin County Subproject**				
Monitoring Point	Code	Monitoring Date	SO_2	NO_2	PM_{10}
road at County downtown	1	July 2016	⩽ 0.006	0.0225	0.0731
water supply station	2	July 2016	⩽ 0.006	0.0221	0.0865
Subproject	**Fuhai County Subproject**				
Monitoring point	Code	Monitoring Date	SO_2	NO_2	PM_{10}
Train station Road	1	July 17 2016	⩽ 0.006	0.0172	0.0963
Solid waste filling Farm	2	July 18, 2016	⩽ 0.006	0.0176	0.0907
subproject	**Habahe County subproject**				
Monitoring point	Code	monitoring date	SO_2	NO_2	PM_{10}
wastewater treatment plant	1	July, 2016	⩽ 0.006	0.0208	0.1213
Solid waste filling Farm	2	July, 2016	⩽ 0.006	0.0191	0.1107
road at County downtown	3	July 2016	⩽ 0.006	0.0218	0.1042
subproject	**Qinghe County subproject**				
monitoring point	Code	monitoring date	SO_2	NO_2	PM_{10}

water supply plant	1	July 2016	⩽ 0.006	0.0152	0.0913
monitoring point	Code	monitoring date	SO_2	NO_2	TSP
County's wastewater treatment plant	1	Sept. 2016	0.011	0.005	0.096
Takeshenken land port's water supply plant	2	Sept. 2016	0.006	0.003	0.070
Takeshenken land port's wastewater treatment plant	3	Sept. 2016	0.005	0.004	0.097
Subproject	**Jimunai County subproject**				
monitoring point	Code	Monitoring date	SO_2	NO_2	PM_{10}
road at County downtown	1	July, 2016	⩽ 0.006	0.0124	0.0292
Solid waste filling Farm	2	July 16, 2016	⩽ 0.006	0.0136	0.0317
Daily Standard limitation Value for Ambient air Quality Class Ⅱ					
			SO_2	NO_2	PM_{10}
Standard limitation value (SLV)			0.15	0.10	0.15

Dark data show the value can meet related SLV; Red data show the value exceed the related SLV and the exceeding percentage.

Monitoring results show that the air quality monitoring at the monitoring sites can reach appropriate standards. Altay region's air quality is at good condition.

Table 5 Altay Prefecture Environmental Monitoring Station, Environmental Surface Water Quality monitoring (2015-2016)

unit: mg/L

单位名称：Subproject 布尔津县亚行贷款子项目 **Buerjin County Subproject**				采样地点 Monitoring Point： 布尔津水文站 **Buerjin County** Hydrological station				监测时间 Monitoring Date：2015 年 7 月; July 2015	
项目 Item	PH		溶解氧 Dissolve Oxygen (DO)	高锰酸盐指数 Permanganate index	生化需氧量 BOD	氨氮 NH_3-N	石油类 oil	挥发酚 Volatile Phenol	汞 Hg
监测值 monitoring Value	7.5		10.442	5.133	2.041	0.1353	0.0172	0.0020	0.00001
项目 Item	铅 Pd	化学需氧量 CODcr	总氮 TN	总磷 TP	铜 Cu	锌 Zn	氟化物 Fluoride	硒 Se	砷 As
监测值 monitoring Value	0.0011	19.32	0.812	0.0345	0.051	0.058	0.436	0.0005	0.0019
项目 Item	镉 Cd	六价铬 Cr^{6+}	氰化物 Cyanide	阴离子表面活性剂 Anionic surfactant	硫化物 sulfide	粪大肠菌群个/L Fecal coliform bacteria/L	硫酸盐 Sulfate	氯化物 Chloride	硝酸盐氨 Ammonium nitrate
监测值 monitoring Value	0.0001	0.005	0.0044	0.053	0.005	490	29.84	4.542	0.266

项目 Item	矿 化 度 Salinity	悬浮物 Suspended Solid (SS)	水温（^{0}C） Temperature	流 量 (m/S) water Flow					
监 测 值 monitoring Value	134	124	18	1.0					
单位名称 Subproject 福海县亚行贷款项目 **Fuhai County Subproject**				采样地点：Monitoring Point： 福海顶山 **Fuhai County Ding Hill**				监 测 时 间 monitoring Date： 2015 年 6 月; June 2015	
项目 Item	PH	电导率 Conductivity （ms/m）	溶解氧 Dissolve Oxygen (DO)	高锰酸盐指数 Permanganate index	生 化 需 氧 量 BOD	氨氮 NH_3-N	石油类 oil	挥发酚 Volatile Phenol	汞 Hg
监 测 值 monitoring Value	7.4	52.3	10.1	2.52	2.0	0.057	0.01	0.002	0.00002
项目 Item	铅 Pd	化 学 需 氧 量 CODcr	总氮 TN	总磷 TP	铜 Cu	锌 Zn	氟 化 物 Fluoride	硒 Se	砷 As
监 测 值 monitoring	0.001	12.58	0.11	0.03	0.001	0.05	0.54	0.005	0.0015

Value									
项目 Item	镉 Cd	六价铬 Cr^{6+}	氰化物 Cyanide	阴离子表面活性剂 Anionic surfactant	硫化物 sulfide	粪大肠菌群个/L Fecal coliform bacteria/L	硫酸盐 Sulfate	氯化物 Chloride	硝酸盐氨 Ammonium nitrate
监测值 monitoring Value	0.0001	0.007	0.004	0.053	0.005	80	127	30.8	0.02
项目 Item	矿化度 Salinity	悬浮物 Suspended Solid (SS)	水温（^{0}C） Temperature	流量 (m/S) water Flow					
监测值 monitoring Value	346（38.4%）	50	14	1					
单位名称：Subproject 哈巴河县亚行贷款项目 **Habahe County subproject**				采样地点：Monitoring point 哈巴河大桥 **Habahe County Habahe river bridge**				监测时间 Monitoring Data： 2015 年 6 月; June 2015	
项目 Item	PH	电导率 Conductivity（ms/m）	溶解氧 Dissolve Oxygen (DO)	高锰酸盐指数 Permanganate index	生化需氧量 BOD	氨氮 NH_3-N	石油类 oil	挥发酚 Volatile Phenol	汞 Hg

监测值 monitoring Value	7.3	8.5	8.78	3.35	2.09	0.142	0.01	0.002	0.00005
项目 Item	铅 Pd	化学需氧量 CODcr	总氮 TN	总磷 TP	铜 Cu	锌 Zn	氟化物 Fluoride	硒 Se	砷 As
监测值 monitoring Value	0.001	15.7	0.81	0.023	0.05	0.05	0.17	0.0005	0.0005
项目 Item	镉 Cd	六价铬 Cr^{6+}	氰化物 Cyanide	阴离子表面活性剂 Anionic surfactant	硫化物 sulfide	粪大肠菌群个/L Fecal coliform bacteria/L	硫酸盐 Sulfate	氯化物 Chloride	硝酸盐氨 Ammonium nitrate
监测值 monitoring Value	0.00014	0.005	0.004	0.05	0.005	20	4.78	1.53	0.31
项目 Item	矿化度 Salinity	悬浮物 Suspended Solid (SS)	水温（^{0}C） Temperature	流量 (m/S) water Flow					
监测值 monitoring Value	120	40	6	1					

单位名称 Subproject 青河县亚行贷款项目 **Qinghe County subproject**				采样地点：Monitoring Point 青河县塔克什肯大桥 **Qinghe County Taikesheken bridge**				监测时间 Monitoring Date： 2015 年 7 月 July 2015	
项目 Item	PH	电导率 Conductivity（ms/m）	溶解氧 Dissolve Oxygen (DO)	高锰酸盐指数 Permanganate index	生化需氧量 BOD	氨氮 NH_3-N	石油类 oil	挥发酚 Volatile Phenol	汞 Hg
监测值 monitoring Value	7.1	4.7	9.77	1.64	2.8	0.042	0.01	0.002	0.00003
项目 Item	铅 Pd	化学需氧量 CODcr	总氮 TN	总磷 TP	铜 Cu	锌 Zn	氟化物 Fluoride	硒 Se	砷 As
监测值 monitoring Value	0.001	9.6	0.98	0.026	0.05	0.05	0.18	0.0005	0.0005
项目 Item	镉 Cd	六价铬 Cr^{6+}	氰化物 Cyanide	阴离子表面活性剂 Anionic surfactant	硫化物 sulfide	粪大肠菌群个/L Fecal coliform bacteria/L	硫酸盐 Sulfate	氯化物 Chloride	硝酸盐氨 Ammonium nitrate

监 测 值 monitoring Value	0.0001	0.004	0.004	0.05	0.005	80	13.4	3.61	0.26
项目 Item	矿 化 度 Salinity	悬浮物 Suspended Solid (SS)	水温（^{0}C） Temperature	流 量 (m/S) water Flow					
监 测 值 monitoring Value	90	57	13	1					
项目 Item	PH	悬浮颗粒物 Suspended Particles	溶解氧 Dissolve Oxygen (DO)	氨氮 NH_3-N	总磷 TP	生 化 需 氧 量 BOD5	化 学 需 氧 量 CODcr	石油类 oil	
监 测 值 monitoring Value	7.6	7	5.4	0.058	0.035	1.4	8.4	0.02	

单位名称 Subproject 青河县亚行贷款项目 **Qinghe County subproject**				采样地点：Monitoring Point 青河县额尔齐斯河 Ertix River in Qinghe				监 测 时 间 Monitoring Date： 2016 年 9 月 Sept. 2016	
项目 Item	PH	悬浮颗粒物 Suspended Particles	溶解氧 Dissolve Oxygen	氨氮 NH_3-N	总磷 TP	生 化 需 氧 量 BOD5	化 学 需 氧 量 CODcr	石油类 oil	

			(DO)						
监 测 值 monitoring Value	7.6	7	5.4	0.058	0.035	1.4	8.4	0.02	
单位名称 Subproject 吉木乃县亚行贷款项目 **Jimunai County subproject**				采样地点：Monitoring Point 吉木乃饮用水水源地 Jimunai Count Drinking water sources				监 测 时 间 Monitoring Date： 2015 年 7 月; July 2015	
项目 Item	PH	电导率 Conductivity （ms/m）	溶解氧 Dissolve Oxygen (DO)	高锰酸盐指数 Permanganate index	生 化 需 氧 量 BOD	氨氮 NH_3-N	石油类 oil	挥发酚 Volatile Phenol	汞 Hg
监 测 值 monitoring Value	7.2	5.2	10.23	1.831	2.99	0.0451	0.012	0.002	0.00005
项目 Item	铅 Pd	化 学 需 氧 量 CODcr	总氮 TN	总磷 TP	铜 Cu	锌 Zn	氟 化 物 Fluoride	硒 Se	砷 As
监 测 值 monitoring Value	0.001	10.5	0.291	0.024	0.001	0.05	0.191	0.0005	
项目 Item	镉 Cd	六价铬 Cr^{6+}	氰 化 物	阴 离 子 表 面 活	硫化物	粪 大 肠 菌 群 个	硫酸盐	氯化物	硝酸盐氨

			Cyanide	性剂 Anionic surfactant	sulfide	/L Fecal coliform bacteria/L	Sulfate	Chloride	Ammonium nitrate
监测值 monitoring Value	0.0001	0.005	0.004	0.05	0.005	330	6.5	2.04	0.24
项目 Item	矿化度 Salinity	悬浮物 Suspended Solid (SS)	水温（^{0}C） Temperature	流量 (m/S) water Flow	镍 Ni	甲醛 Formaldehyde			
监测值 monitoring Value	52	33	13		0.01	0.05			
III类地表水标准限值 Class III Surface Water standard limitation value(SLV)									
项目 Item	PH	电导率 Conductivity （ms/m）	溶解氧 Dissolve Oxygen (DO)	高锰酸盐指数 Permanganate index	生化需氧量 BOD	氨氮 NH_3-N	石油类 oil	挥发酚 Volatile Phenol	汞 Hg
标准限值 SLV	6--9		high than 5	6.0	4.0	1.0	0.05	0.005	0.001
项目 Item	铅 Pd	化学需氧量	总氮 TN	总磷 TP	铜 Cu	锌 Zn	氟化物	硒 Se	砷 As

		CODcr					Fluoride		
标准限值 SLV	0.05	20	1.0	0.2	1.0	1/0	1.0	0.01	0.05
项目	镉 Cd	六价铬 Cr^{6+}	氰化物 Cyanide	阴离子表面活性剂 Anionic surfactant	硫化物 sulfide	粪大肠菌群个/L Fecal coliform bacteria/L	硫酸盐 Sulfate	氯化物 Chloride	硝酸盐氨 Ammonium nitrate
标准限值 SLV	0.005	0.05	0.2	0.2	0.2	10000	250	250	10.0
项目 Item	矿化度 Salinity	悬浮物 Suspended Solid (SS)	水温（^{0}C） Temperature	流量 (m/S) water Flow	镍 Ni	甲醛 Formaldehyde			
标准限值 SLV	250.0	250			0.02	0.9			

Dark data show the value can meet related SLV ; Red data show the value exceed the related SLV and the exceeding percentage.
The sampling is at the sewage and wastewater collect pond, the exceeding are come from the domestic wastewater, and not ascribed by the construction activities.

Table 6 Xinjiang zhongyu environmental monitoring company, wastewater monitoring (2016)

unit: mg/M^3

单位名称 Subproject 青河县亚行贷款项目 **Qinghe County subproject**				采样地点：Monitoring point 青河县排水工程施工场地生活废水 Domestic wastewater from **Qinghe County's WWTP**				监测时间：Monitoring date 2016 年 9 月 Sept. 2016	
项目 Item	PH	悬浮物(SS)	溶解氧 DO	氨氮 NH_3-N	总磷 TP	生化需氧量 BOD	化学需氧量 COD	石油类 Oil	
监测值 monitoring Value	7.8	26	7.4	0.607	0.047	2.6	8.8	0.09	
单位名称 Subproject 青河县亚行贷款项目 **Qinghe County subproject**				采样地点：Monitoring point 青河县塔克什肯镇供水工程工地 生活废水 Domestic wastewater from **Takeshenken land port's water plant**				监测时间：Monitoring date 2016 年 9 月 Sept. 2016	
项目 Item	PH	悬浮物 (SS)	溶解氧 DO	氨氮 NH_3-N	总磷 TP	生化需氧量 BOD	化学需氧量 COD	石油类 Oil	
监测值 monitoring Value	7.79	21	7.4	0.610	0.052	2.3	9.4	0.10	
单位名称 Subproject 青河县亚行贷款项目 **Qinghe County subproject**				采样地点：Monitoring point 青河县塔克什肯镇排水工程工地 生活废水 Domestic wastewater from **Takeshenken land port's WWTP**				监测时间：Monitoring date 2016 年 9 月 Sept. 2016	
项目 Item	PH	悬浮物(SS)	溶解氧 DO	氨氮 NH_3-N	总磷 TP	生化需氧量 BOD	化学需氧量 COD	石油类 Oil	
监测值 monitoring Value	7.80	15	7．6	0.631	0.051	2.4	9.6	0.10	
单位名称 Subproject 青河县亚行贷款项目 **Qinghe County subproject**				采样地点：Monitoring point 青河县县城排水工程工地 施工废水 Domestic wastewater from **Qinghe County's WWTP**				监测时间：Monitoring date 2016 年 9 月 Sept. 2016	

项目 Item		PH		悬浮物(SS)			石油类 Oil		
监测值 monitoring Value		7.63		28			0.08		
单位名称 Subproject 青河县亚行贷款项目 **Qinghe County subproject**				采样地点：Monitoring point 青河县塔克什肯镇供水工程工地 施工废水 Domestic wastewater from **Takeshenken land port's water plant**			监测时间：Monitoring date 2016 年 9 月 Sept. 2016		
项目 Item		PH		悬浮物 (SS)			石油类 Oil		
监测值 monitoring Value		7.51		18			0.09		
单位名称 Subproject 青河县亚行贷款项目 **Qinghe County subproject**				采样地点：Monitoring point 青河县塔克什肯镇排水工程工地 施工废水 Domestic wastewater from **Takeshenken land port's WWTP**			监测时间：Monitoring date 2016 年 9 月 Sept. 2016		
项目 Item		PH		悬浮物 (SS)			石油类 Oil		
监测值 monitoring Value		7.63		24			0.10		
污水综合排放标准二级标准排放限值 Integrated Wastewater Discharge Standard Class 2 Standard Limitation Value									
项目 Item	PH	悬浮物 Suspended Solid (SS)	化学需氧量 COD_{Cr}	氨氮 NH_3-N	总磷 TP	石油类 Oil	动植物油类 Animal and plant oils	生化需氧量 BOD_5	粪大肠菌群（个/L） Fecal coliform becteria: N/L
标准限值 SLV	6--9	30	120	25	3	10	20	30	10^4

Dark data show the value can meet related SLV ; Red data show the value exceed the related SLV and the exceeding percentage.
The sampling is at the sewage and wastewater collect pond, the exceeding are come from the domestic wastewater, and not ascribed by the construction activities.

Table 7 Xinjiang zhongyu environmental monitoring company, Noise monitoring (2016)

unit: Leq (dB(A))

单位名称 Subproject 青河县亚行贷款项目 **Qinghe County subproject**			采样地点：Monitoring point 青河县排水工程施工场地 **Qinghe County's WWTP**		监测时间：Monitoring date 2016 年 9 月 Sept. 2016
位置 side	昼间 Day	夜间 night	位置 side	昼间 Day	夜间 night
1- East 东	45.3	40.5	2- 西 west	49	42.9
3- 南 south	47.4	41.2	4- 北 North	48.3	42.1
单位名称 Subproject 青河县亚行贷款项目 **Qinghe County subproject**			采样地点：Monitoring point 青河县塔克什肯镇供水工程工地 **Qinghe County's water plant**		监测时间：Monitoring date 2016 年 9 月 Sept. 2016
位置 side	昼间 Day	夜间 night	位置 side	昼间 Day	夜间 night
5- East 东	49.9	42.8	6- 西 west	47.9	42.5
7- 南 south	46.9	41.0	8- 北 North	46.6	40.8
单位名称 Subproject 青河县亚行贷款项目 **Qinghe County subproject**			采样地点：Monitoring point 青河县塔克什肯镇排水工程工地 **Takeshenken land port's WWTP**		监测时间：Monitoring date 2016 年 9 月 Sept. 2016
位置 side	昼间 Day	夜间 night	位置 side	昼间 Day	夜间 night
9- East 东	47.2	40.9	10- 西 west	46.9	40.1
位置 side	昼间 Day	夜间 night	位置 side	昼间 Day	夜间 night
11- south 南	42.1	39.8	12- north 北	44.4	39.9

Ⅶ. Conclusion

Based on observations from site inspections and the monitoring results, the following conclusions are made with regard to environmental management plan implementation by IAs for current construction activities:

The ongoing construction activities have fulfilled the environmental protection and management obligations required by both PRC and ADB.

The IAs of all subproject and the contracts have largely fulfilled their obligations in implementing the mitigation measures in their construction contracts and schemes.

Through the implementation of these measures, the negative impacts ascribed by the construction activities have been reduced to a minimum level and at temporary and construction site size.

However, to a certain extent there have still been unavoidable impacts on the environment, but these unavoidable impacts are within an acceptable level, are temporary, and are largely confined to the construction site.

At the time of this report, there has been no any environmental complaint from the local communities and local EPBs.

Relevant environmental measures have been undertaken for the waste water from the construction, with any discharge of waste water exceeding the standard.

With the relevant environment management measures taken, the construction at the site shows no major impact over the quality of nearby surface water.

Compliance of Safety or Environmental Standards.

Slightly higher wastewater levels were observed. No other violations of safety or environment standard.

Ⅷ. Recommendation

1. The contractors should carry out the civilized construction, strengthen the supervision and management and reduce the impact on the surrounding environment;

2. The contractors should continue to implement strictly the project's environment management plan and measures and reduce the unfavorable impacts of waste water on the environment during construction;

3. At the completion of construction activities, the ecological and environmental recovery shall promptly conducted. Under the possible condition, ecological environment recovery should be given priority to with vegetation restoration as soon as possible;

4. For the Construction site, the external environmental monitoring should be carried out in a timely manner.

Appendix: Internal Environmental Monitor

ADB Altay Loan Project

Qing site environment inspection
Supervisor: Yin Yayun

Inspection Content	Y	N	NA	Note (issues identified, possible reasons, suggestions or mitigations), relative actions
On-site environment management plan, redress mechanism and information disclosure				
1. Are environment supervisors designated by contractors? Are environment supervisors staying on-site?	√			Implement the requirements of environment plan
2. Has the on-site management plan been prepared	√			Implement the requirements of environment plan
3. Has the construction related information been disclose on site (including construction period, contractor's information)?	√			
4. Has the redress mechanism been disclosed on site?				
Soil erosion and pollution				
5. Does the contractor prepare the soil erosion management plan?	√			Implement the requirements of water conservation plan
6. Are there any facilities preventing the runoff entering the construction site and diverting the runoff generated in construction site to the existing drainage facilities (interception and drainage channels)?	√			Implement the requirements of water conservation plan
7. Are the affected area stabilized after the cease of earthwork? are the plantation been rehabilitated?	√			Rehabilitate the plantation if possible
8. Are the chemicals, hazardous materials, wastes been kept in impermeable safety area? And coverage if any?			√	
9. Are there any oil leakage?		√		

Inspection Content	Y	N	NA	Note (issues identified, possible reasons, suggestions or mitigations), relative actions
10.Are there any plugging tools, plugging sands or leakage absorption chemicals?			√	
11.Are the chemical properly reserved and marked?			√	
Air quality control				
12.Are the gas-emission machines on-site checked regularly?	√			Implemented the requirements of environment management plan
13.Are there any coverage or watering for the dirt-generated construction materials? Are the unpacking for cement bags conducted in sheltered place?	√			Implemented related mitigation measures of environment management plan
14.Are there any coverage such as oilcloth prepared for the trucks transporting the stones and sands?	√			Implemented the requirements of environment management plan
15.Are the equipment maintained well? (any black smoke observed? if so, please elaborate the name and location of equipment).	√			Implemented the requirements of environment management plan
16.Are there any fence for the major construction activities generated dirt?	√			Implemented related mitigation measures of environment management plan
17.Have the contractors regularly communicated with the IAs, nearby villages and residents, identified any complaint in air quality?	√			
18.Are there any air quality monitor after last inspection? if so, please list the monitor results or the next monitor date.	√			
Noise				
19.Are there any standard-exceeded noise? if so, please state the noise generation location and equipment.		√		
20.Have contractors regularly inspected the equipment and ensured the compliance with standard GB	√			Implemented the requirements of environment management plan

Inspection Content	Y	N	NA	Note (issues identified, possible reasons, suggestions or mitigations), relative actions
12523-90?				
21.Are the locations of construction activities such as concrete stirring 300m or more far away from the sensitive areas?	√			Implemented the requirements of environment management plan
22.Is the permission of construction noise effective in the restricted time?	√			Implemented the requirements of environment management plan
23.Are the doors closed when the air compressors and electric machines in operation?	√			Implemented the requirements of environment management plan
24.Are the spare equipment powered off or decreased?	√			Implemented the requirements of environment management plan
25.Are there any mitigations to the noise (blimp or barrier)?	√			Implemented related mitigation measures of environment management plan
26.Are there any noise inspection since last inspection? if so, please state the inspection results or the next inspection time.	√			See Table 7 for details
27.Have contractors regularly communicated with IAs, nearby residents, and identified any complaint in sound environment?	√			Implemented the requirements of environment management plan
Surface water pollution				
28.Have contractors established temporary management plan for oil and other hazardous materials (leakage management plan)?			√	
29.Are the existing wastewater treatment facilities (grit chamber) maintained properly?	√			Implemented the requirements of environment management plan and mitigation measures
30.Are the construction wastewater and domestic wastewater generated in construction site discharged to sewage networks or the treatment facilities on-site to ensure the qualified emission?			√	

Inspection Content	Y	N	NA	Note (issues identified, possible reasons, suggestions or mitigations), relative actions
31.Is the sewage discharged to stormwater pipelines?			√	
Solid waste management				
32.Are the sites clean? (Are there any trash that be cleaned timely)	√			Implemented the requirements of environment management plan and mitigation measures
33.Are the flammable and combustible materials separated with the others?			√	
34.Is the garbage sorted to facilitate the recycling and reuse?	√			Implemented the requirements of environment management plan
35.Are the construction wastes, recycled wastes and normal wastes regularly cleaned and delivered?	√			Implemented related mitigation measures of environment management plan
36.Are the chemical wastes and hazardous wastes (if any) collected and properly disposed by qualified units?			√	
Safety and health				
37.Have contractors established and submitted EHS management plan?	√			Implemented the requirements of environment management plan
38.Are there any clean water provided on site? Are there enough toilets for workers?	√			Implemented the requirements of environment management plan
39.Are there any garbage collection facilities in construction site?	√			Implemented related mitigation measures of environment management plan
40.Have workers been provided with labor protection facilities according to related rules of health and safety?	√			Implemented the requirements of environment management plan
41.Have contractors established emergency plans for accidents and urgent situations?	√			Implemented the requirements of environment management plan
42.clear marks or signs prepared in construction site to aware the public the potential dangers, such as cars,	√			Implemented the requirements of environment management

Inspection Content	Y	N	NA	Note (issues identified, possible reasons, suggestions or mitigations), relative actions
hazardous materials, excavation, to enhance public safety awareness;				plan
43.Are there any measures such as fence to ensure the safety in construction site and prohibit the random in and out?	√			Implemented related mitigation measures of environment management plan
44.Are there any traffic management measures (speed limitation, travel limitation)?			√	
45.Are the extinguishers and fire fighting facilities in their respective validity period? Are the fire fighting access blocked?	√			Implemented related mitigation measures of environment management plan
Plantation				
46.Are there any plantation over deteriorated by construction activities?		√		Implemented related mitigation measures of environment management plan
47.Are the plantation in affected area rehabilitated after the completion of civil works?			√	
Historic heritage and relics				
48.Are there any historic heritage or relics identified? if so, ensure to protect the historic heritage or relics with proper measures.		√		
Others				
49.Any other questions or suggestions		√		

Habahe site environment inspection

Inspector: Wu Jianyong

Inspection Content	Y	N	NA	Note (issues identified, possible reasons, suggestions or mitigations), relative actions
On-site environment management plan, redress mechanism and information disclosure				
1. Are environment supervisors designated by contractors? Are environment supervisors staying on-site?	√			Implemented the requirements of environment management plan
2. Has the on-site management plan been prepared	√			Implemented the requirements of environment management plan
3. Has the construction related information been disclose on site (including construction period, contractor's information)?	√			Implemented the requirements of environment management plan
4. Has the redress mechanism been disclosed on site?				
Soil erosion and pollution				
5. Does the contractor prepare the soil erosion management plan?	√			Implemented the requirements of water and soil conservation plan
6. Are there any facilities preventing the runoff entering the construction site and diverting the runoff generated in construction site to the existing drainage facilities (interception and drainage channels)?	√			Implemented water the requirements of water and soil conservation plan and environment management plan
7. Are the affected area stabilized after the cease of earthwork? are the plantation been rehabilitated?	√			Rehabilitated the plantation in possible conditions
8. Are the chemicals, hazardous materials, wastes been kept in impermeable safety area? And coverage if any?			√	
9. Are there any oil leakage?		√		
10. Are there any plugging tools, plugging sands or leakage absorption chemicals?			√	

Inspection Content	Y	N	NA	Note (issues identified, possible reasons, suggestions or mitigations), relative actions
11.Are the chemical properly reserved and marked?			√	
Air quality control				
12.Are the gas-emission machines on-site checked regularly?	√			Implemented the requirements of environment management plan
13.Are there any coverage or watering for the dirt-generated construction materials? Are the unpacking for cement bags conducted in sheltered place?	√			Implemented related mitigation measures of environment management plan
14.Are there any coverage such as oilcloth prepared for the trucks transporting the stones and sands?	√			Implemented the requirements of environment management plan and related mitigation meausres
15.Are the equipment maintaned well? (any black smoke observed? if so, please elaborate the name and location of equipment).	√			Implemented the requirements of environment management plan
16.Are there any fence for the major construction activities generated dirt?	√			Implemented related mitigation measures of environment management plan
17.Have the contractors regularly communicated with the IAs, nearby villages and residents, identified any complaint in air quality?	√			Implemented the requirements of environment management plan
18.Are there any air quality monitor after last inspection? if so, please list the monitor results or the next monitor date.	√			
Noise				
19.Are there any standard-exceeded noise? if so, please state the noise generation location and equipment.		√		
20.Have contractors regularly inspected the equipment and ensured the compliance with standard GB 12523-90?	√			Implemented the requirements of environment management plan
21.Are the locations of construction activities such as concrete stirring 300m or more far away from the	√			Implemented the requirements of environment management plan

Inspection Content	Y	N	NA	Note (issues identified, possible reasons, suggestions or mitigations), relative actions
sensitive areas?				
22.Is the permission of construction noise effective in the restricted time?	√			Implemented the requirements of environment management plan
23.Are the doors closed when the air compressors and electric machines in operation?	√			Implemented the requirements of environment management plan
24.Are the spare equipment powered off or decreased?	√			Implemented the requirements of environment management plan
25.Are there any mitigations to the noise (blimp or barrier)?	√			Implemented related mitigation measures of environment management plan
26.Are there any noise inspection since last inspection? if so, please state the inspection results or the next inspection time.	√			Not exceeding the standards
27.Have contractors regularly communicated with IAs, nearby residents, and identified any complaint in sound environment?	√			
Surface water pollution				
28.Have contractors established temporary management plan for oil and other hazardous materials (leakage management plan)?			√	
29.Are the existing wastewater treatment facilities (grit chamber) maintained properly?	√			Implemented the requirements of environment management plan and mitigation measures
30.Are the construction wastewater and domestic wastewater generated in construction site discharged to sewage networks or the treatment facilities on-site to ensure the qualified emission?			√	
31.Is the sewage discharged to stormwater pipelines?			√	
Solid waste management				
32.Are the sites clean? (Are there any trash that be cleaned timely)	√			Implemented related mitigation measures of environment management plan

Inspection Content	Y	N	NA	Note (issues identified, possible reasons, suggestions or mitigations), relative actions
33.Are the flammable and combustible materials separated with the others?			√	
34.Is the garbage sorted to facilitate the recycling and reuse?	√			Implemented the requirements of environment management plan
35.Are the construction wastes, recycled wastes and normal wastes regularly cleaned and delivered?	√			Implemented the requirements of environment management plan
36.Are the chemical wastes and hazardous wastes (if any) collected and properly disposed by qualified units?			√	
Safety and health				
37.Have contractors established and submitted EHS management plan?	√			Implemented the requirements of environment management plan
38.Are there any clean water provided on site? Are there enough toilets for workers?	√			Implemented the requirements of environment management plan
39.Are there any garbage collection facilities in construction site?	√			Implemented related mitigation measures of environment management plan
40.Have workers been provided with labor protection facilities according to related rules of health and safety?	√			Implemented the requirements of environment management plan
41.Have contractors established emergency plans for accidents and urgent situations?	√			Implemented the requirements of environment management plan
42.clear marks or signs prepared in construction site to aware the public the potential dangers, such as cars, hazardous materials, excavation, to enhance public safety awareness;	√			Implemented the requirements of environment management plan
43.Are there any measures such as fence to ensure the safety in construction site and prohibit the random in and out?	√			Implemented related mitigation measures of environment management plan
44.Are there any traffic management measures (speed limitation, travel limitation)?			√	

Inspection Content	Y	N	NA	Note (issues identified, possible reasons, suggestions or mitigations), relative actions
45.Are the extinguishers and fire fighting facilities in their respective validity period? Are the fire fighting access blocked?	√			Implemented related mitigation measures of environment management plan
Plantation				
46.Are there any plantation over deteriorated by construction activities?		√		Implemented related mitigation measures of environment management plan
47.Are the plantation in affected area rehabilitated after the completion of civil works?			√	
Historic heritages and relics				
48.Are there any historic heritage or relics identified? if so, ensure to protect the historic heritage or relics with proper measures.		√		
Others				
49.Any other questions or suggestions		√		

Jimunai site environment inspection
Inspector: Zhou Yuanliang

Inspection Content	Y	N	NA	Note (issues identified, possible reasons, suggestions or mitigations), relative actions
On-site environment management plan, redress mechanism and information disclosure				
1. Are environment supervisors designated by contractors? Are environment supervisors staying on-site?	√			Implemented the requirements of environment management plan
2. Has the on-site management plan been prepared	√			Implemented the requirements of environment management plan
3. Has the construction related information been disclose on site (including construction period, contractor's information)?	√			Implemented the requirements of environment management plan
4. Has the redress mechanism been disclosed on site?	√			Implemented the requirements of environment management plan
Soil erosion and pollution				
5. Does the contractor prepare the soil erosion management plan?	√			Implemented the requirements of water and soil conservation plan
6. Are there any facilities preventing the runoff entering the construction site and diverting the runoff generated in construction site to the existing drainage facilities (interception and drainage channels)?	√			Implemented water the requirements of water and soil conservation plan and environment management plan
7. Are the affected area stabilized after the cease of earthwork? are the plantation been rehabilitated?	√			Rehabilitated the plantation in possible conditions
8. Are the chemicals, hazardous materials, wastes been kept in impermeable safety area? And coverage if any?			√	
9. Are there any oil leakage?			√	

Inspection Content	Y	N	NA	Note (issues identified, possible reasons, suggestions or mitigations), relative actions
10. Are there any plugging tools, plugging sands or leakage absorption chemicals?			√	
11. Are the chemical properly reserved and marked?			√	
Air quality control				
12. Are the gas-emission machines on-site checked regularly?	√			
13. Are there any coverage or watering for the dirt-generated construction materials? Are the unpacking for cement bags conducted in sheltered place?	√			
14. Are there any coverage such as oilcloth prepared for the trucks transporting the stones and sands?	√			
15. Are the equipment maintaned well? (any black smoke observed? if so, please elaborate the name and location of equipment).	√			The construction facilites are newly procured, and in good operation condition with no black smoke generated
16. Are there any fence for the major construction activities generated dirt?	√			
17. Have the contractors regularly communicated with the IAs, nearby villages and residents, identified any complaint in air quality?	√			
18. Are there any air quality monitor after last inspection? if so, please list the monitor results or the next monitor date.	√			Good air quality
Noise				
19. Are there any standard-exceeded noise? if so, please state the noise generation location and equipment.		√		
20. Have contractors regularly inspected the equipment and ensured the compliance with standard GB 12523-90?	√			Implemented the requirements of environment management plan

Inspection Content	Y	N	NA	Note (issues identified, possible reasons, suggestions or mitigations), relative actions
21. Are the locations of construction activities such as concrete stirring 300m or more far away from the sensitive areas?	√			Implemented the requirements of environment management plan
22. Is the permission of construction noise effective in the restricted time?	√			Implemented the requirements of environment management plan
23. Are the doors closed when the air compressors and electric machines in operation?	√			Implemented the requirements of environment management plan
24. Are the spare equipment powered off or decreased?	√			Implemented the requirements of environment management plan
25. Are there any mitigations to the noise (blimp or barrier)?	√			Implemented related mitigation measures of environment management plan
26. Are there any noise inspection since last inspection? if so, please state the inspection results or the next inspection time.	√			The noise in construction site has not exceed the standard
27. Have contractors regularly communicated with IAs, nearby residents, and identified any complaint in sound environment?	√			
Surface water pollution				
28. Have contractors established temporary management plan for oil and other hazardous materials (leakage management plan)?			√	
29. Are the existing wastewater treatment facilities (grit chamber) maintained properly?			√	
30. Are the construction wastewater and domestic wastewater generated in construction site discharged to sewage networks or the treatment facilities on-site to ensure the qualified emission?	√			Implemented related mitigation measures of environment management plan

Inspection Content	Y	N	NA	Note (issues identified, possible reasons, suggestions or mitigations), relative actions
31. Is the sewage discharged to stormwater pipelines?		√		Implemented related mitigation measures of environment management plan
Solid waste management				
32. Are the sites clean? (Are there any trash that be cleaned timely)	√			Implemented the requirements of environment management plan
33. Are the flammable and combustible materials separated with the others?			√	
34. Is the garbage sorted to facilitate the recycling and reuse?	√			Implemented the requirements of environment management plan
35. Are the construction wastes, recycled wastes and normal wastes regularly cleaned and delivered?	√			Implemented related mitigation measures of environment management plan
36. Are the chemical wastes and hazardous wastes (if any) collected and properly disposed by qualified units?			√	
Health and safety				
37. Have contractors established and submitted EHS management plan?	√			Implemented the requirements of environment management plan
38. Are there any clean water provided on site? Are there enough toilets for workers?	√			Implemented the requirements of environment management plan
39. Are there any garbage collection facilities in construction site?	√			Implemented related mitigation measures of environment management plan
40. Have workers been provided with labor protection facilities according to related rules of health and safety?	√			
41. Have contractors established emergency plans for accidents and urgent situations?	√			Safety generation emergency plan has been established and reviewed by supervisors
42. clear marks or signs prepared in construction site to aware the public the potential dangers, such as cars,	√			Implemented the requirements of environment management plan

Inspection Content	Y	N	NA	Note (issues identified, possible reasons, suggestions or mitigations), relative actions
hazardous materials, excavation, to enhance public safety awareness;				
43. Are there any measures such as fence to ensure the safety in construction site and prohibit the random in and out?	√			Implemented the requirements of environment management plan
44. Are there any traffic management measures (speed limitation, travel limitation)?	√			Implemented related mitigation measures of environment management plan
45. Are the extinguishers and fire fighting facilities in their respective validity period? Are the fire fighting access blocked?			√	
Plantation				
46. Are there any plantation over deteriorated by construction activities?		√		
47. Are the plantation in affected area rehabilitated after the completion of civil works?	√			Implemented related mitigation measures of environment management plan
Historic heritages and relics				
48. Are there any historic heritage or relics identified? if so, ensure to protect the historic heritage or relics with proper measures.		√		
Others				
49. Any other questions or suggestions		√		

Buerjin site environment inspection
Site location: Buerjin County
Inspector: Ma Jian

Inspection Content	Y	N	NA	Note (issues identified, possible reasons, suggestions or mitigations), relative actions
On-site environment management plan, redress mechanism and information disclosure				
1. Are environment supervisors designated by contractors? Are environment supervisors staying on-site?	√			Implemented the requirements of environment management plan
2. Has the on-site management plan been prepared	√			Implemented the requirements of environment management plan
3. Has the construction related information been disclose on site (including construction period, contractor's information)?	√			Implemented the requirements of environment management plan
4. Has the redress mechanism been disclosed on site?	√			Implemented the requirements of environment management plan
Soil erosion and pollution				
5. Does the contractor prepare the soil erosion management plan?			√	
6. Are there any facilities preventing the runoff entering the construction site and diverting the runoff generated in construction site to the existing drainage facilities (interception and drainage channels)?			√	
7. Are the affected area stabilized after the cease of earthwork? are the plantation been rehabilitated?	√			Rehabilitated the plantation in possible conditions
8. Are the chemicals, hazardous materials, wastes been kept in impermeable safety area? And coverage if any?			√	
9. Are there any oil leakage?		√		

Inspection Content	Y	N	NA	Note (issues identified, possible reasons, suggestions or mitigations), relative actions
10. Are there any plugging tools, plugging sands or leakage absorption chemicals?			√	
11. Are the chemical properly reserved and marked?			√	
Air quality control				
12. Are the gas-emission machines on-site checked regularly?	√			Implemented the requirements of environment management plan
13. Are there any coverage or watering for the dirt-generated construction materials? Are the unpacking for cement bags conducted in sheltered place?	√			Implemented related mitigation measures of environment management plan
14. Are there any coverage such as oilcloth prepared for the trucks transporting the stones and sands?	√			Implemented the requirements of environment management plan
15. Are the equipment maintaned well? (any black smoke observed? if so, please elaborate the name and location of equipment).	√			Implemented the requirements of environment management plan
16. Are there any fence for the major construction activities generated dirt?	√			Implemented related mitigation measures of environment management plan
17. Have the contractors regularly communicated with the IAs, nearby villages and residents, identified any complaint in air quality?	√			
18. Are there any air quality monitor after last inspection? if so, please list the monitor results or the next monitor date.	√			Not exceeding standard
Noise				
19. Are there any standard-exceeded noise? if so, please state the noise generation location and		√		

Inspection Content	Y	N	NA	Note (issues identified, possible reasons, suggestions or mitigations), relative actions
equipment.				
20. Have contractors regularly inspected the equipment and ensured the compliance with standard GB 12523-90?	√			Implemented the requirements of environment management plan
21. Are the locations of construction activities such as concrete stirring 300m or more far away from the sensitive areas?	√			Implemented the requirements of environment management plan
22. Is the permission of construction noise effective in the restricted time?	√			Implemented the requirements of environment management plan
23. Are the doors closed when the air compressors and electric machines in operation?	√			Implemented the requirements of environment management plan
24. Are the spare equipment powered off or decreased?	√			Implemented the requirements of environment management plan
25. Are there any mitigations to the noise (blimp or barrier)?	√			Implemented related mitigation measures of environment management plan
26. Are there any noise inspection since last inspection? if so, please state the inspection results or the next inspection time.	√			Not exceeding standard
27. Have contractors regularly communicated with IAs, nearby residents, and identified any complaint in sound environment?	√			Implemented the requirements of environment management plan
Surface water pollution				
28. Have contractors established temporary management plan for oil and other hazardous materials (leakage management plan)?	√			Implemented the requirements of environment management plan
29. Are the existing wastewater treatment facilities (grit chamber) maintained properly?	√			Implemented the requirements of environment management plan

Inspection Content	Y	N	NA	Note (issues identified, possible reasons, suggestions or mitigations), relative actions
30. Are the construction wastewater and domestic wastewater generated in construction site discharged to sewage networks or the treatment facilities on-site to ensure the qualified emission?	√			Implemented related mitigation measures of environment management plan
31. Is the sewage discharged to stormwater pipelines?		√		
Solid waste management				
32. Are the sites clean? (Are there any trash that be cleaned timely)	√			Implemented the requirements of environment management plan
33. Are the flammable and combustible materials separated with the others?	√			Implemented the requirements of environment management plan
34. Is the garbage sorted to facilitate the recycling and reuse?	√			Implemented the requirements of environment management plan
35. Are the construction wastes, recycled wastes and normal wastes regularly cleaned and delivered?	√			Implemented related mitigation measures of environment management plan
36. Are the chemical wastes and hazardous wastes (if any) collected and properly disposed by qualified units?			√	
Safety and health				
37. Have contractors established and submitted EHS management plan?	√			Implemented the requirements of environment management plan
38. Are there any clean water provided on site? Are there enough toilets for workers?	√			Implemented the requirements of environment management plan
39. Are there any garbage collection facilities in construction site?	√			Implemented requirements of environment management plan and related mitigation measures
40. Have workers been provided with labor protection facilities according to related rules of	√			Implemented requirements of environment management plan

Inspection Content	Y	N	NA	Note (issues identified, possible reasons, suggestions or mitigations), relative actions
health and safety?				
41. Have contractors established emergency plans for accidents and urgent situations?	√			Safety generation emergency plan has been established and reviewed by supervisors
42. Clear marks or signs prepared in construction site to aware the public the potential dangers, such as cars, hazardous materials, excavation, to enhance public safety awareness;	√			Implemented the requirements of environment management plan
43. Are there any measures such as fence to ensure the safety in construction site and prohibit the random in and out?	√			Implemented the requirements of environment management plan
44. Are there any traffic management measures (speed limitation, travel limitation)?	√			Implemented related mitigation measures of environment management plan
45. Are the extinguishers and fire fighting facilities in their respective validity period? Are the fire fighting access blocked?	√			Implemented the requirements of environment management plan
Plantation				
46. Are there any plantation over deteriorated by construction activities?		√		Implemented related mitigation measures of environment management plan
47. Are the plantation in affected area rehabilitated after the completion of civil works?	√			Implemented related mitigation measures of environment management plan
Historic heritages and relics				
48. Are there any historic heritage or relics identified? if so, ensure to protect the historic heritage or relics with proper measures.		√		
Others				
49. Any other questions or suggestions				

Fuhai site environment inspection

Inspector: Li Hongwei

Inspection Content	Y	N	NA	Note (issues identified, possible reasons, suggestions or mitigations), relative actions
On-site environment management plan, redress mechanism and information disclosure				
1. Are environment supervisors designated by contractors? Are environment supervisors staying on-site?	Y			Implemented the requirements of environment management plan
2. Has the on-site management plan been prepared	Y			Implemented the requirements of environment management plan
3. Has the construction related information been disclose on site (including construction period, contractor's information)?	Y			Implemented the requirements of environment management plan
4. Has the redress mechanism been disclosed on site?	Y			Implemented the requirements of environment management plan
Soil erosion and pollution				
5. Does the contractor prepare the soil erosion management plan?	Y			Implemented the requirements of water and soil conservation plan
6. Are there any facilities preventing the runoff entering the construction site and diverting the runoff generated in construction site to the existing drainage facilities (interception and drainage channels)?	Y			Implemented the requirements of water and soil conservation plan
7. Are the affected area stabilized after the cease of earthwork? are the plantation been rehabilitated?	Y			Implemented water the requirements of water and soil conservation plan and environment management plan
8. Are the chemicals, hazardous materials, wastes been kept in impermeable safety area? And coverage if any?	Y			Rehabilitated the plantation in possible conditions
9. Are there any oil leakage?		N		

Inspection Content	Y	N	NA	Note (issues identified, possible reasons, suggestions or mitigations), relative actions
10. Are there any plugging tools, plugging sands or leakage absorption chemicals?	Y			Implemented the requirements of water and soil conservation plan
11. Are the chemical properly reserved and marked?	Y			Implemented water the requirements of water and soil conservation plan and environment management plan
Air quality control				
12. Are the gas-emission machines on-site checked regularly?	Y			Implemented the requirements of environment management plan
13. Are there any coverage or watering for the dirt-generated construction materials? Are the unpacking for cement bags conducted in sheltered place?	Y			Implemented related mitigation measures of environment management plan
14. Are there any coverage such as oilcloth prepared for the trucks transporting the stones and sands?	Y			Implemented the requirements of environment management plan
15. Are the equipment maintaned well? (any black smoke observed? if so, please elaborate the name and location of equipment).	Y			Implemented the requirements of environment management plan
16. Are there any fence for the major construction activities generated dirt?	Y			Implemented related mitigation measures of environment management plan
17. Have the contractors regularly communicated with the IAs, nearby villages and residents, identified any complaint in air quality?	Y			
18. Are there any air quality monitor after last inspection? if so, please list the monitor results or the next monitor date.				Next monitor will be in September
Noise				
19. Are there any standard-exceeded noise? if so, please state the noise		N		

Inspection Content	Y	N	NA	Note (issues identified, possible reasons, suggestions or mitigations), relative actions
generation location and equipment.				
20. Have contractors regularly inspected the equipment and ensured the compliance with standard GB 12523-90?	Y			Implemented the requirements of environment management plan
21. Are the locations of construction activities such as concrete stirring 300m or more far away from the sensitive areas?	Y			Implemented the requirements of environment management plan
22. Is the permission of construction noise effective in the restricted time?	Y			Implemented the requirements of environment management plan
23. Are the doors closed when the air compressors and electric machines in operation?	Y			Implemented the requirements of environment management plan
24. Are the spare equipment powered off or decreased?	Y			Implemented the requirements of environment management plan
25. Are there any mitigations to the noise (blimp or barrier)?	Y			Implemented related mitigation measures of environment management plan
26. Are there any noise inspection since last inspection? if so, please state the inspection results or the next inspection time.	Y			Not exceeding standard
27. Have contractors regularly communicated with IAs, nearby residents, and identified any complaint in sound environment?	**Y**			
Surface water pollution				
28. Have contractors established temporary management plan for oil and other hazardous materials (leakage management plan)?	**Y**			Implemented the requirements of environment management plan
29. Are the existing wastewater treatment facilities (grit chamber) maintained properly?	**Y**			Implemented the requirements of environment management plan

Inspection Content	Y	N	NA	Note (issues identified, possible reasons, suggestions or mitigations), relative actions
30. Are the construction wastewater and domestic wastewater generated in construction site discharged to sewage networks or the treatment facilities on-site to ensure the qualified emission?	**Y**			Implemented related mitigation measures of environment management plan
31. Is the sewage discharged to stormwater pipelines?		**N**		
Solid waste management				
32. Are the sites clean? (Are there any trash that be cleaned timely)	**Y**			Implemented the requirements of environment management plan
33. Are the flammable and combustible materials separated with the others?	**Y**			Implemented the requirements of environment management plan
34. Is the garbage sorted to facilitate the recycling and reuse?	**Y**			Implemented the requirements of environment management plan
35. Are the construction wastes, recycled wastes and normal wastes regularly cleaned and delivered?	**Y**			Implemented related mitigation measures of environment management plan
36. Are the chemical wastes and hazardous wastes (if any) collected and properly disposed by qualified units?			**Y**	
Safety and health				
37. Have contractors established and submitted EHS management plan?	**Y**			Implemented the requirements of environment management plan
38. Are there any clean water provided on site? Are there enough toilets for workers?	**Y**			Implemented the requirements of environment management plan
39. Are there any garbage collection facilities in construction site?	**Y**			Implemented related mitigation measures of environment management plan

Inspection Content	Y	N	NA	Note (issues identified, possible reasons, suggestions or mitigations), relative actions
40. Have workers been provided with labor protection facilities according to related rules of health and safety?	**Y**			
41. Have contractors established emergency plans for accidents and urgent situations?	**Y**			Safety generation emergency plan has been established and reviewed by supervisors
42. clear marks or signs prepared in construction site to aware the public the potential dangers, such as cars, hazardous materials, excavation, to enhance public safety awareness;	**Y**			Implemented the requirements of environment management plan
43. Are there any measures such as fence to ensure the safety in construction site and prohibit the random in and out?	**Y**			Implemented the requirements of environment management plan
44. Are there any traffic management measures (speed limitation, travel limitation)?	**Y**			Implemented related mitigation measures of environment management plan
45. Are the extinguishers and fire fighting facilities in their respective validity period? Are the fire fighting access blocked?	**Y**			
Plantation				
46. Are there any plantation over deteriorated by construction activities?		**N**		Implemented related mitigation measures of environment management plan
47. Are the plantation in affected area rehabilitated after the completion of civil works?	**Y**			Implemented related mitigation measures of environment management plan
Historic heritages and relics				
48. Are there any historic heritage or relics identified? if so, ensure to protect the historic heritage or relics with proper measures.		**N**		
Others				
49. Any other questions or suggestions				