Environmental Monitoring Report

3st Semi-Annual Report
Jan 2016

People's Republic of China: Qinghai Delingha Concentrating Solar Thermal Power Project

Prepared by CGN DELINGHA SOLAR ENERGY CO.LTD.for the People's Republic of China and the Asian Development Bank.

CURRENCY EQUIVALENTS
(as of 30 Dec, 2015)

Currency Unit	-	CNY
CNY 1.00	=	$ 0.1542
$ 1.00	=	CNY 6.486

ABBREVIATIONS

ADB – Asian Development Bank
ASL – above sea level
CGN – China General Nuclear Power Group
CHP – combined heat and power
CGN – China General Nuclear Power Holding Corporation
CGN-DSE – China General Nuclear Delingha Solar Energy Co. Ltd.
CNY – Chinese yuan
CSC – construction supervision company
CSP – concentrating solar power
DI – design institute
DNI – direct normal irradiance
EA – executing agency
EHS – environment, health and safety
EIA – environmental impact assessment
EMP – environmental management plan
EMS – environmental monitoring station
EMU – environmental management unit
EPB – Environmental Protection Bureau
FSR – feasibility study report
GDP – gross domestic product
GHG – greenhouse gas
GRM – grievance redress mechanism
HTF – heat transfer fluid
IA – implementing agency
IEE – initial environmental examination
IT – interim yarget
LFR – linear fresnel reflector
MEP – Ministry of Environmental Protection
MSDS – material safety data sheet
NDRC – National Development and Reform Commission
PPCU – project public complaint unit
PPE – personnel protective equipment
PPTA – project preparatory technical assistance
PRC – People’s Republic of China
SCA – solar collector assembly
SCE – solar collection element
SEDC – Solar Energy Development Co., Ltd.
SPS – Safeguard Policy Statement, ADB
TA – technical assistance
TES – thermal energy storage

WHO – World Health Organization

WEIGHTS AND MEASURES

BOD_5 – biochemical Oxygen demand, five days
cm – centimeter
CO_2 – carbon dioxide
COD – chemical oxygen demand
dB(A) – A-weighted sound pressure level in decibels
DO – dissolved oxygen
DOD – dissolved oxygen deficit
GJ – gigajoule
ha – hectare
kcal – kilocalories
kg – kilogram
km – kilometer
kWh – kilowatt-hour
m – meter
m/s – meters per second
m^3 – cubic meters
mg/l – milligrams per Liter
mg/m^3 – Milligrams per cubic meter
MW – megawatt
NO_2 – nitrogen dioxide
NOx – nitrogen oxides
^oC – degrees celsius
pH – a measure of the acidity or alkalinity of a solution
PM_{10} – particulate matter smaller than 10 micrometers
SO_2 – sulfur dioxide
TN – total nitrogen
TSP – total suspended particulates

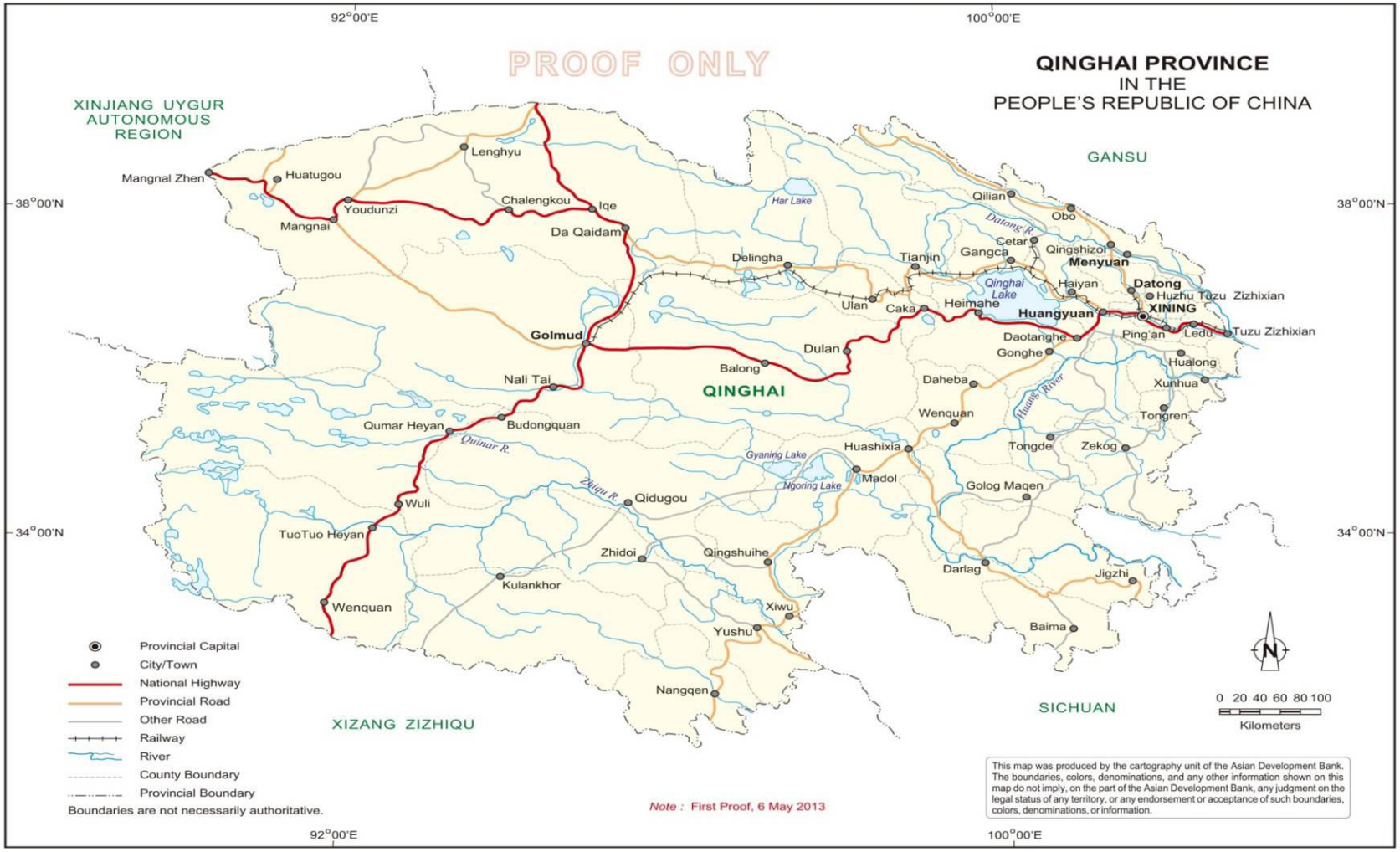
NOTE

I. In this report, "$" refers to US dollars.

CONTENTS

BASIC PROJECT INFORMATION

ADB Loan No.	Loan 3075-PRC
Project Title	Qinghai Delingha Concentrating Solar Thermal Power Project Project
Borrower	People's Republic of China
Executing Agency	CGN SOLAR ENERGY DEVELOPMENT CO.LTD.
Implementing Agency	CGN DELINGHA SOLAR ENERGY CO.LTD.
Total Estimated Cost	$384,609,851
ADB Loan	$150,000,000
Counterpart Financing	CNY 1,055,355,000
Loan Approval Date	23 January 2014
Loan Agreement Signed Date	23 January 2014
ADB Loan Effectiveness Date	23 January 2014
Project Complete Date	30 November 2017
Original Loan Closing Date	31 MAY 2018
Exchange Rate	6.486
Date of Latest ADB Loan Review Mission	20 Sept 2014
Type of This Report	Semi-annual Environmental Monitoring Report
Period Covered by This Report	1 July 2015 to 30 Dec 2015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Quinar R.
Wuli
TuoTuo Heyan
Wenquan
Kulankhor
Zhidoi
Qidugou
Zhiqu R.
Qingshuihe
Xiwu
Yushu
Nangqen
Har Lake
Delingha
Ulan
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Dulan
Balong
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Gangca
Cetar
Qilian
Obo
Datong R.
Qingshizoi
Menyuan
Qinghai Lake
Haiyan
Heimahe
Huangyuan
Datong
Huzhu Tuzu Zizhixian
XINING
Ping'an
Ledu
Tuzu Zizhixian
Daotanghe
Gonghe
Hualong
Xunhua
Daheba
Huang River
Wenquan
Tongren
Tongde
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Madol
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Darlag
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Baima
Provincial Capital
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National Highway
Provincial Road
Other Road
Railway
River
County Boundary
Provincial Boundary
Boundaries are not necessarily authoritative.
Note : First Proof, 6 May 2013
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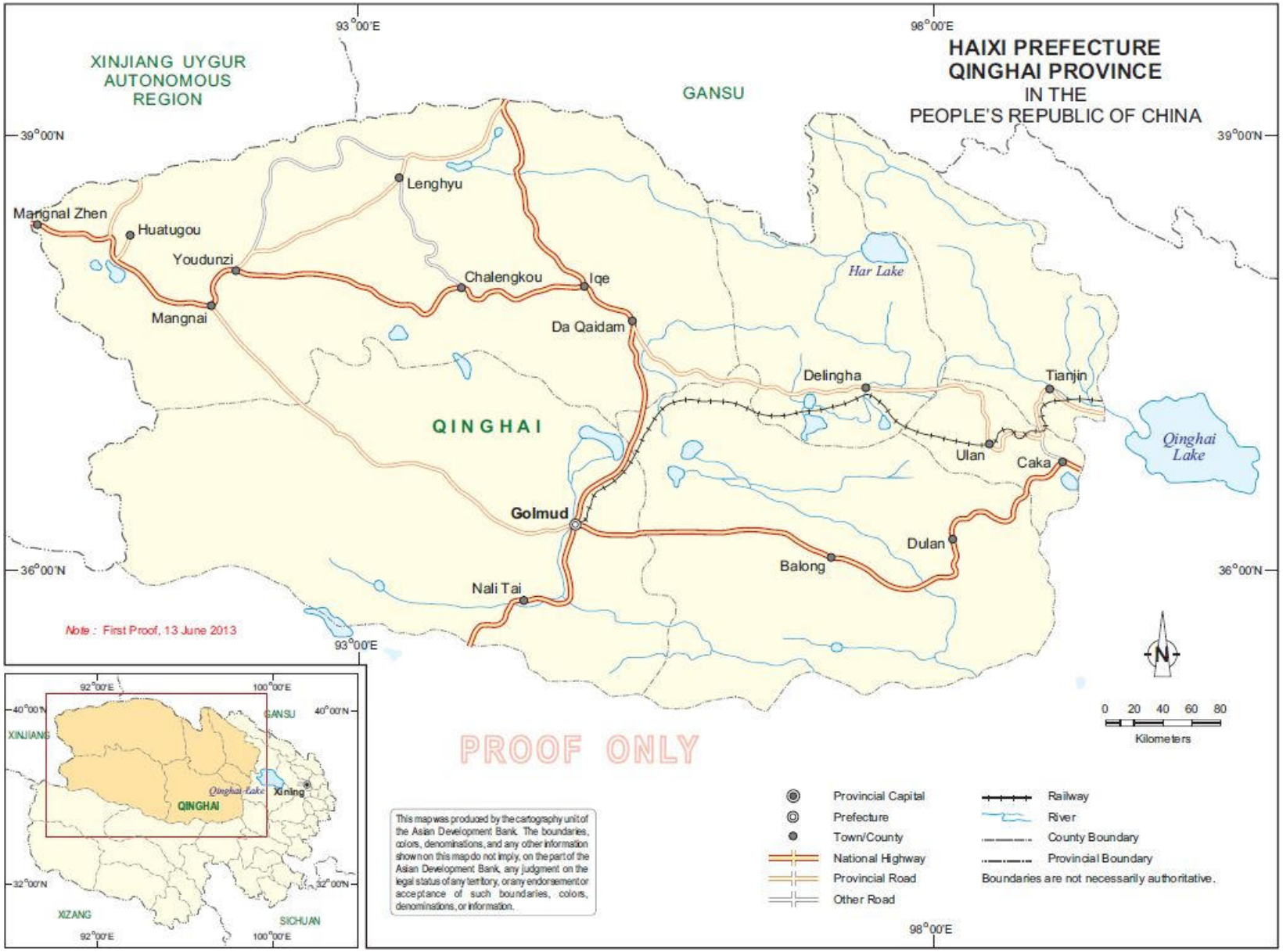
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Qinghai Lake
Note : First Proof, 13 June 2013
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Provincial Capital
Prefecture
Town/County
National Highway
Provincial Road
Other Road
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County Boundary
Provincial Boundary
Boundaries are not necessarily authoritative.
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XINJIANG
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Qinghai Lake
Xining
QINGHAI
XIZANG
SICHUAN

I. INTRODUCTION

1. This report is the second environmental monitoring report of the Qinghai Delingha Concentrating Solar Thermal Power Project, covering the period between July, 2015 and Dec, 2015. It is prepared by CGN DELINGHA SOLAR ENERGY CO.LTD.

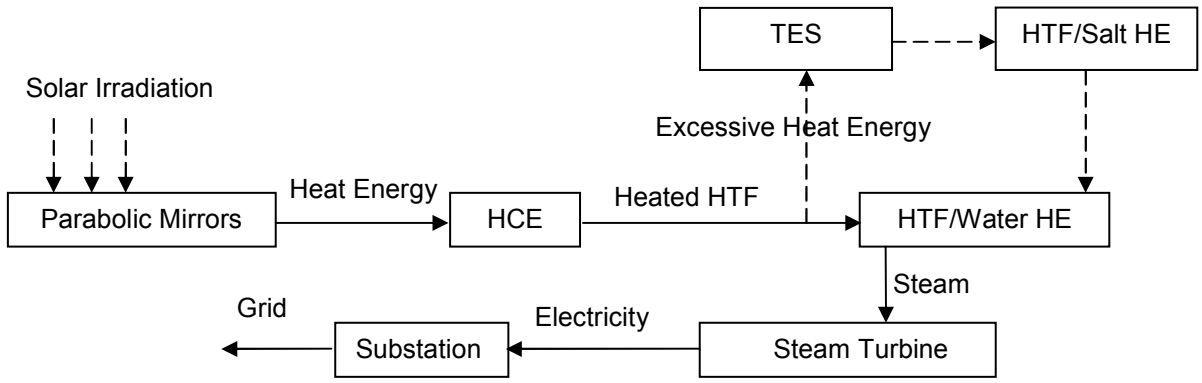
2. This environmental monitoring report is prepared in accordance with the project environmental management plan and environmental monitoring framework.

A. Project summary

3. The concentrating solar thermal power (CSP) project will construct (i) 621,300 m2 of solar field area with 190 solar collector loops; (ii) one 50 MW steam turbine; (iii) two molten salt-tanks with seven hours thermal energy storage capacity; and (iv) a natural gas fired heater for startup, anti-freezing protection for heat transfer fluid (HTF). Air cooling system will be adopted for the steam condensing system to conserve water.

4. CSP technologies generate electricity in a similar way to conventional power stations by using steam to drive a turbine. The fundamental principle of CSP technologies is to collect the energy carried by sunrays, allowing HTF to absorb the collected energy and then converting the thermal energy into electricity. Excessive energy will be stored in molten salt tanks and will be used when sunrays are insufficient to generate energy. The process of energy conversion in a CSP plant is illustrated in Figure 1.

Figure 3-1: Major Components of a CSP Plant



Note: HCE = heat collection element, HE = heat exchanger, HTF = heat transfer fluid, TES = thermal energy storage.

5. The parabolic trough solar collector system is designed to concentrate the sunrays via parabolic curved solar reflectors (mirrors) onto a thermally efficient linear receiver (absorber tubes). The receiver is located in the optical focal line of the collector. The receiver consists of a specially coated absorber tube embedded in an evacuated glass envelope. Synthetic thermal oil is used as HTF and is circulated in the absorber tubes. The HTF will be heated to approximately 400°C by the sunrays. Heat exchangers will transfer the collected solar energy to water and this process continues until the temperature of the water is heated sufficiently to generate steam.

After pre-heater, evaporator, and super-heater, superheated stream will be used to run a conventional steam turbine generating kinetic energy and converting it into electrical energy. The cooled HTF will be circulated back to absorber tubes. The exhaust steam leaving the turbine is transported to a condenser, which cools the steam and form water. Then, the water is returned to the heat exchanger. This cycle is repeated.

B. Implementation Organization

6. This project is construction of a concentrating solar thermal plant in Delingha, Qinghai Province, the People's Republic of China (PRC). China General Nuclear Power Holding Co., Ltd. (CGN) is the executing agency (EA) for the project. A project leading group was established under the CGN and is responsible for directing the project and providing policy guidance during project implementation. China General Nuclear Delingha Solar Energy Co., Ltd.(CGN-DSE) is the implementation agency (IA). Table 1 shows the summary of institutional arrangement and actions taken by various institutions.

Table 1. Summary of Institutional Arrangement and Actions taken by Institutions

Roles and Responsibilities	Actions Taken Up To the End of Reporting Period
China General Nuclear Power Holding Co., Ltd. (CGN) (EA) • The executing agency • Hold a final responsibility on the overall implementation of the EMP and EMP monitoring; • Provide advice and guidance to the IA; • Review EMP monitoring reports and submit them to ADB.	The heath, safety and environment (HSE) department of CGN provided advice and guidance to the IA in regards to environmental performance during this reporting period, reviewed this environmental monitoring report, and submitted it to ADB.
Project Leading Group • Direct the project and provide guidance during project implementation; • Review project implementation progress and take additional measures if necessary.	A Project Leading Group was established including team leader/team member/responsibility, The leader is project manager named dayong liu, and the team members include site manager named hongliang ding, HSE manager and QC/QA manager junqing wang.,etc,. the summary number is 12 person. Leader is in charge of the project, and achieves the project goals .All team members should assistant the leader to achieve the project goals, and are responsible for their own fields. The project holds meeting in the end of every month.
China General Nuclear Delingha Solar Energy Co., Ltd.(CGN-DSE) (IA) • Establish EMU; • Provide supervision to contractor and CSC, • submit monthly report to the EA on the implementation of the EMP; • Work with design institutes and the tendering company in preparing bidding documents to ensure environmental protection provisions are included in them; • Submit semiannual EMP	EMU has been established including three members. EMU provides daily supervision to contractor and CSC, submits monthly environment report to the EA, and works with design institutes and the tendering companies in preparing bidding documents with environmental protection requirements. This is first time to Submit semi-annual environmental monitoring reports to the EA and ADB.

Roles and Responsibilities	Actions Taken Up To the End of Reporting Period
monitoring reports to the EA and ADB; • Hire environmental consultants.	
Construction supervision companies (CSCs) • Responsible for the daily inspection, monitoring, and evaluation of the implementation of EMP mitigation measures at construction site.	Beijing Huaxia supervision Co.,LTD is hired as a CSC. It has four supervisors including 1 HSE supervisor, who are responsible for the daily inspection, monitoring, and evaluation of the implementation of EMP mitigation measures such as solid waste/wastewater/dust control at construction site.
Contractors • Responsible for implementing mitigation measures on a daily basis according the contract conditions.	Northwest engineering corporation limited is the Contractor for power island civil work. the company is responsible for implementing mitigation measures on a daily basis according the contract conditions and EMP requirements.
Environmental Monitoring Stations (EMS) • Conduct EMP monitoring and provide data to the IA	The local Environmental Monitoring Station will conduct EMP monitoring upon the commencement of civil work 。The third party named Shanxi jingchen monitoring technology CO.,LTD is the designated company for monitoring.
A loan implementation environmental consultant • Provide technical assistance to the EA and the IA for implementing the EMP; • Provide training to the staff of the CGN, IA, contractor and CSC; and • Assist the IA in preparing semiannual and annual environmental reports.	A loan implementation environmental consultant has not been engaged during this reporting period.
Local EPB • Inspect the facilities during construction and operation to ensure compliance with the PRC requirements; Enforce applicable environmental laws and regulations.	IA has communicated with local EPB - Environmental Protection Administration of Delingha city according with the EMP requirements to inspect the facilities timely during construction and operation to ensure compliance with the PRC requirements. The inspection was taken in March 2015, and the result is good.
Local EMS • Conduct environmental compliance monitoring according to the PRC requirement.	IA has communicated with local EMS- Shanxi jingchen monitoring technology CO.,LTD, according with the EMP requirements to inspect the Monitoring Parameter once a month during construction and operation to ensure compliance with the PRC requirements. and the data are below the standard values.

7. During this reporting period, the following structure for the project health, safety, and environment (HSE) organization was established. The current members of the project HSE organization are three members from the project IA; two member from CSC; two

members from contractors. Detailed information on the HSE members are tasks are described in table below.

Name	**Title/Role at the Project HSE**	**Company**	**Tasks**
Junqing wang	HSE manager	CGN-DSE	Responsible for all the HSE issues in the project
Ma chunlei	HSE engineer	CGN-DSE	Responsible for the HSE issues in his own field
Yan zhaoping	HSE engineer	CGN-DSE	Responsible for the HSE issues in his own field
Tan junsheng	HSE manager	**Beijing huaxia supervision Co.,LTD**	Responsible for the HSE issues in his own field
Liu wei	HSE manager	**Beijing huaxia supervision Co.,LTD**	Responsible for the HSE issues in his own field
Li tao	HSE engineer	**Northwest engineering corporation limited**	Responsible for the HSE issues in his own field
Zhang yajiang	HSE engineer	**Northwest engineering corporation limited**	Responsible for the HSE issues in his own field

II. IMPLEMENTATION PROCESS

A. Overall Project Implementation Progress

8. Enclosing wall construction has been completed, the construction of power island was started at July of 2015.

B. Detailed Engineering Progress

9. Detailed geological survey work has started since November 2014 and it was finished in January 2015. Preliminary design work has commenced since November 2014, which was completed in February 2015. Table below provides detailed progress.

Table 2.Summary of Engineering Progress

Project Components	**Detailed Description of Work**	**Contractor/ Implementer**	**Implementation Status**
I. Site Preparation			
	Detailed geological survey work and preliminary design work has commenced since November 2014	Environmental science research and design institute of Qinghai province	Finished
II. Civil Works			
A. Solar Field Civil Works			

Project Components	Detailed Description of Work	Contractor/ Implementer	Implementation Status
	Not start		
B. Power Island Civil Works			
	It was started at July of 2015. The construction basement will be finished at Jan of 2016.	Northwest engineering corporation limited	ongoing
III. Earth Works			
1. Site treatment	land leveling work	Changsha Construction Engineering Group and HENAN installation group co., Ltd	Finished Start :july of 2014, Complete: 15 december of 2014
	Enclosing wall construction	Changsha Construction Engineering Group and HENAN installation group co., Ltd	Finished Start :Jan of 2015, Complete: May of 2015
IV. Equipment Installation			
	Not start		

C. Project Cost Associated with the Environmental Management Plan

10. The estimated total budgets for environmental mitigation and monitoring are as follows:
    i) Mitigation cost during construction is estimated at CNY7.85 million or $1.3 million;
    ii) Annual operating cost for environmental protection is CNY3.68 million or $594,000;
    iii) Monitoring cost during construction is estimated at CNY225,000 or $35,000;
    iv) Estimated annual monitoring cost during operation is CNY570,000 or $92,000; and
    v) The estimated budget for capacity building is CNY70,000 or $11,000.

11. The total environmental investment of the Project of CNY 17.519 million ($ 1.99 million) is allocated, which accounts 0.63% of the total project investment. During this reporting period, As the project just finished the Enclosing wall construction, total cost of CNY400,000 was spent for Enclosing wall construction, which included costs for solid wastes disposal, spraying water on construction site and earth/material handling routes where fugitive dust.

III. IMPLEMENTATION OF THE ENVIRONMENTAL MANAGEMENT PLAN

A. Background

12. The EMP was developed aligning with the ADB safeguards statement policy (2009) and environmental impact assessment (EIA) report of the Qinghai Delingha CSP project approved by the Qinghai EPB on 28 December 2012. The EMP was agreed between the ADB and CGN as a part of the loan agreement.

B. Loan Covenants

13. The loan covenants of the project stipulate the following agreements on environmental safeguards. Table below provides the compliance status of environment related project covenants during this reporting period.

Table 3.Environment Related Project Agreements and Compliance Status

Environment Related Project Agreements	Compliance Status
CGN, CGN-SEDC and CGN-DSE shall ensure, and cause other involved agencies to ensure, that the preparation, design, construction, implementation, operation and decommissioning of the Project, and that all Project facilities comply with (a) all applicable laws and regulations of the Borrower relating to environment; (b) the environmental safeguards; and (c) all measures and requirements set forth in the IEE, the EMP, and any corrective or preventative actions (i) set forth in a Safeguards Monitoring Report, or (ii) as subsequently agreed between ADB and CGN.	Complied
CGN, CGN-SEDC and CGN-DSE shall ensure that the provisions of the IEE, and EMP as well as any requirements under the Safeguards Policy Statement also apply to the portion of the Project to be financed by CGN, CGN-DSE and EXIM.	Complied
CGN, CGN-SEDC and CGN-DSE shall make available necessary budgetary and human resources to fully implement the EMP.	Complied
CGN, CGN-SEDC and CGN-DSE shall ensure that all bidding documents and works contracts contains provisions that require contractors to (a) comply with the measures relevant to the contractor set forth in the IEE and the EMP(to the extent they concern impacts on respective affected people under Environmental Safeguards during construction), and any corrective or preventative actions (i) set forth in a Safeguards Monitoring Report, or (ii) as subsequently agreed between ADB and CGN; (b) make available a budget for all such environmental and social measures; (c) provide CGN-DSE with a written notice of any unanticipated environmental, resettlement or social risks or impacts that arise during construction, implementation or operation of the project that were not considered in the IEE, and the EMP; and (d) reinstate pathways and other local infrastructure to at least their pre-Project condition as soon as possible and no later than the completion of construction.	Complied. IEE report is one of attachment of the contract. All the requirements of IEE are included in the contract and require contractor to implement.
CGN, CGN-SEDC and CGN-DSE shall do, or cause to be done, the following: (a) submit Safeguards Monitoring Reports to ADB in respect of implementation of and compliance with Environmental Safeguards and the EMP, annually during construction and the implementation of the Project and the EMP until the issuance of ADB's Project completion report unless a longer period is agreed in the EMP; and disclose relevant information from such reports to respective affected people under Environmental Safeguards, Involuntary Resettlement Safeguards and Indigenous Peoples Safeguards promptly upon submission; (b) if any unanticipated environmental and/or social risks and impacts arise during construction, implementation or operation of	Complied.

the Project that were not considered in the IEE, and the EMP, promptly inform ADB of the occurrence of such risks or impacts, with detailed description of the event and proposed corrective action plan; and (c) report any actual or potential breach of compliance with the measures and requirements set forth in the EMP promptly after becoming aware of the breach.	
CGN, CGN-SEDC, CGN-DSE, and EXIM shall ensure that no proceeds of the loan are used to finance any activity included in the list of prohibited investment activities provides in appendix 5 of the safeguards policy statement.	Complied

14. The following environmental provisions were included in contracts with Northwest engineering corporation limited, which is:

CGN and CGN-SEDC have signed the ENV agreements with all the subcontractors in accordance with the contacts. The contractors include Northwest engineering corporation limited. In the agreement, all the ENV responsibilities and obligations have been clarified. The measures include, but are not limited to,

(a) Employer has to provide qualified earplug to employee to avoid the damage to ear when they are working under the circumstance over 85db.
(b) Employer has to provide qualified mask to employee to avoid the damage to respiratory system when working under the dusty circumstance
(c) All the subcontractors have to take measures to use sewage system effectively to avoid to pollute the environment.
(d) All the subcontractors should take measures to prevent oil leakage in accordance with main contractor's ENV requirements.
(e) All the employer should buy assurance for the employee in case of any injury of Employee.

C. Implementation of Mitigation Measures

15. The EMP lists measures, including pollution control and mitigation measures for environmental assurance during the project construction and operation. Table 4 presents the EMP during project implementation and the summary of actions taken to mitigate environmental adverse impacts of the project during this reporting period.

Table 4:The Environmental Management Plan (EMP) and the Implementation Status of the EMP

Category	Potential Impacts and Issues	Mitigation Measures and/or Safeguards	Responsibility		Implementation Status
			Implemented by	Supervised by	
A. Pre-construction Phase					
Design Mitigation facilities and measures	Land acquisition	The combined land acquisition and ethnic minority development plan was prepared in accordance with relevant law in the PRC and ADB's SPS. Each household will be compensated with the amount that is equivalent to three times of the annual average net household income. In addition to compensation, the affected people are entitled to receive (i) employment opportunities during construction and operation of the project, (ii) portable solar photovoltaic power generation sets, (iii) high insulation yurt (nomad tent), and (iv) trainings on employment skills and grassland management.	IA	CGN	Land acquisition has been completed; Land expropriation compensation has been paid.
	Project's site and routes selection	The site of CSP plant and the layout will be reconfirmed to avoid or minimize potential adverse impacts on the surrounding environments and communities.	DI and IA	CGN	The site of CSP plant and the layout has reconfirmed by the government department named Environmental Protection Administration of Delingha city, and the result is that this project meets environment requirements, adverse impacts on the surrounding environments and communities are under control.
	Including mitigation measures and monitoring program in engineering designs	Environmental mitigation measures identified in the IEE and the domestic EIA will be incorporated in the engineering design document and bidding document for the project, and will be included in contract documents for civil constructions and equipment installations. All contractors shall be required to strictly comply with the EMP. EMP monitoring will be incorporated into the engineering design to ensure that environmental impacts are closely monitored.	DI	CGN, IA, local EPB	At the engineering design phase, environmental mitigation measures were discussed and incorporated. The bidding document and contract documents for civil constructions and equipment installations included the provisions that all contractors shall be required to strictly comply with the EMP.
	Fire hazards	Fire protection system will be incorporated in the design of the project.	DI and IA	Local EPB, CGN	Fire protection system is incorporated in the design of the power island project. it was done

Category	Potential Impacts and Issues	Mitigation Measures and/or Safeguards	Responsibility		Implementation Status
			Implemented by	Supervised by	
					from July of 2015. And expected to complete at April of 2016.
Bidding and Contracting	Bidding and contract document preparation	Incorporate environmental mitigation measures indicated in the EMP in bidding documents and construction contracts for the project.	DI and IA	CGN, Local EPB	EMP requirements are included in bidding and contract document
Grievance Redress Mechanism	Establishment of operational GRM	Establish a Project Public Complaints Unit (PPCU) in IA's office; provide training for PPCU members and GRM access points; Disclose the PPCU's phone number, fax, address, and email to the public.	IA	CGN, Local EPB	Project Public Complaints Unit (PPCU) in IA's Delingha project site office has established, Designated person is Mr. junqing wang., phone number (+86 13401077992), it has been disclosed to the public through site information boards.
Training	Training for the site staff to prevent polluting environment	Provide environmental awareness and capacity training for construction staff, concerning the prevention of accidental spillage of hazardous chemicals and oil; pollution of water resources (both surface and groundwater), air pollution and litter control and potential identification of archaeological artifacts. Project Manager shall ensure that the training and capabilities of the Contractor's site staff are adequate to carry out the designated tasks. No operator shall be permitted to operate critical mechanical equipment without having proper certification. Staff should be educated as to the need to refrain from indiscriminate waste disposal and/or pollution of local soil and water resources and receive the necessary safety training.	IA and CSC	CGN, Local EPB	Environmental training has been taken by IA before the start of the work. Totally 4 times training, and 64 persons was trained during July to August of 2015. The new employee can work on site after training. Workers on site should accept the EMP training in accordance with the project HSE training plan. The training contents include the prevention of accidental spillage of hazardous chemicals and oil; pollution of water resources (both surface and groundwater), air pollution and solid waste control. Contractor's site staff have tool box meeting training daily to ensure that they are adequate to carry out the designated task. The HSE engineer or team leader explained and clarified the HSE precautions according to the daily tasks in the

Category	Potential Impacts and Issues	Mitigation Measures and/or Safeguards	Responsibility		Implementation Status
			Implemented by	Supervised by	
					tool box meeting, and all the participators should sign on the records. All staffs can execute and meet the requirements.
B. Construction Phase					
Soil	Soil erosion and contamination due to construction activities	Minimize active open excavation areas during trenching activities and use appropriate compaction techniques for the construction; The contractor should, prior to the commencement of earthworks, determine the average depth of topsoil. The full depth of topsoil should be stripped from areas affected by construction and related activities prior to the commencement of major earthworks including the building footprints, working areas and storage areas. Topsoil will be reused where possible to rehabilitate disturbed areas. Care will be taken not to mix topsoil and subsoil during stripping. Removed topsoil should be transported to a designated landfill site or used onsite for landscaping as required. Ensure that the minimum area of soil is exposed to potential erosion at any one time. Limit construction and material handling activities during periods of rains and high winds. Assess and estimate storm water runoff and prepare a storm water drainage system accordingly to minimize soil erosion. Builda temporary detention pond to control topsoil runoff. Stabilize all earthwork disturbance areas within 14 days after earthwork. Plant native trees and grass in the CSP plant to control soil erosion and properly slop or re-vegetate disturbed surfaces.	Contractors, CSCs	IA, Local EPB, IA	The Contractors take environment protection actions to minimize soil erosion and contamination activities in accordance of EMP requirements. During this reporting period, the project just finished Enclosing wall construction and all the related activities are conformance to requirements. The protection measures include drainage measures, temporary protection on the slope, watering timely, leveling timely etc.

Category	Potential Impacts and Issues	Mitigation Measures and/or Safeguards	Responsibility		Implementation Status
			Implemented by	Supervised by	
		Properly store petroleum products, chemicals and hazardous materials on impermeable surface. Use best management practices to prevent spill of oil and chemical to avoid pollution. Any planned paving or vegetating of the area will be done as soon as the materials are removed to protect and stabilize the soil.			
		Appropriately set up temporary construction camps and storage areas to minimize land area required and impact on soil erosion; Build concrete dikes with sealed surfaces underneath storage tanks containing HTF and hazardous materials. The dike walls must be high enough to contain 110% of the total volume of the storage tanks. Contaminated soil by HTF and/or other hazardous chemicals must be contained and disposed off-site by a third party with proper certification. Remove all construction wastes from the site and transport them to designated spoil disposal site in Delingha. Provide spill cleanup measures and equipment at the construction site. Contractors will be required to develop contingency plans for control of oil and other dangerous substances to prevent soil contamination.			
Wastewater	Surface and groundwater contamination from construction wastewater, and domestic water	Areas where construction equipment is being washed will be equipped with water collection basins and sediment traps. Wastewater from construction activities will be collected in sedimentation tanks, retention ponds, and filter tanks to remove silts and oil.	Contractors, CSC	IA, Local EPB, CGN	At present, concrete batching station site is equipped with water collection basins and sediment traps. The construction wastewater, after sedimentation, was used as the spraying water for fugitive dust control on the

Category	Potential Impacts and Issues	Mitigation Measures and/or Safeguards	Responsibility		Implementation Status
			Implemented by	Supervised by	
		Make sure the storm water channels or natural water path ways are not blocked. The construction wastewater, after sedimentation, will be used as the spraying water for fugitive dust control on the construction site. Adequate sanitary facilities and ablutions must be provided for construction workers. The domestic wastewater from workers camp, after septic treatment, will be utilized for watering vegetation, both planted and natural.			construction site. The domestic wastewater from workers camp is equipped with water collection basins and is cleaned up monthly by local designated agency during the project life cycle. the related activities are conformance to requirements.
Noise	Noise from construction, machinery operation, and transportation activities	Ensure that noise levels from equipment and machinery conform to the PRC standard of GB12523-2011, and properly maintain construction vehicles and machineries to minimize noise. Locate sites for rock crushing, concrete-mixing, and similar activities at least 1 km away from sensitive areas. Machines in intermittent use should be shut down in the intervening periods between work or throttled down to a minimum. Place temporary signs or noise barriers around noise sources during construction, if necessary. Vehicles transporting construction materials or wastes shall slow down and stop honking when passing through or nearby environmentally sensitive locations, such as residential communities, schools and hospitals. Construction activities, and particularly the noisy ones, are to be contained to reasonable hours during the day and early evening. Provide noise personnel protective equipment (PPE) to workers.	Contractors, CSC	IA, local EPB	The project just completed Enclosing wall construction, the noise from equipment and machinery was main noise resource, and was no more than 60db in the daytime, and below 50db at night. The area where this CSP project located is a depopulated zone, so it has no influence on surrounding community. The noise complied with the standard GB12523-2011 etc. Vehicles transporting construction materials or wastes shall slow down and stop honking when passing through or nearby environmentally sensitive locations, such as residential communities, schools and hospitals. Construction activities was be done only in the day from 9 AM. to 6 PM. The related activities are conformance to requirements.
Vibration	Vibration generating	Prohibit pilling and compaction operations at night	Contractors,	IA and local	Yes, the related activities are

Category	Potential Impacts and Issues	Mitigation Measures and/or Safeguards	Responsibility		Implementation Status
			Implemented by	Supervised by	
	by compacting and rolling		CSC	EPB	conformance to requirements. Contractors are prohibited to working at night.
Ambient Air	Fugitive dust generated by construction activities worsens ambient air quality	Spray water on construction sites and earth/material handling routes where fugitive dust is being generated. Keep transport vehicles at low speed in the construction site to reduce fugitive dust generation. Stop the construction activities during strong windy days. Cover materials during truck transportation, in particular, the fine material, to avoid spillage or dust generation Excavations and other clearing activities must only be done during agreed working times and permitting weather conditions to avoid drifting of sand and dust into neighboring areas.	Contractors, CSC	IA, local EPB	The contractors have water truck to spray recycled water on construction sites, earth/material handling areas and routes everyday. Construction materials (sand, gravel, and rocks) and spoil materials are transported trucks covered with tarpaulins. Storage piles are at least 30m downwind of the nearest human settlements. All vehicles (e.g., trucks, equipment, and other vehicles that support construction works) are well maintained and not emit dark, smoky or other emissions in excess of the limits.
	Air emission from vehicles and construction equipment	Store petroleum or other harmful materials in appropriate places and cover to minimize fugitive dust and emission.	Contractors, CSC	IA, Local EPB	the related activities are conformance to requirements. Petroleum, diesel, paint and other harmful materials are stored in the designated place where the HSE signs and protection measures are in place. Anyone who closes to the storage place must wear proper PPE and work in accordance with the procedures.
Solid Waste	Solid waste from construction activities	Establish temporary storage for solid wastes away from water bodies or other environmental sensitive areas, and regularly haul solid waste to an approved and designed landfill in Delingha; All rubble must either be used on site as part of the existing development, or must be taken off the reserve and disposed off at the landfill facility in Delingha.	Contractors, CSC	IA, Local EPB	A temporary storage has been established for solid wastes on site. , Separate hazardous waste from general waste and regularly haul solid waste by local authority designated agency to an approved and designed landfill in Delingha. The waste on site

Category	Potential Impacts and Issues	Mitigation Measures and/or Safeguards	Responsibility		Implementation Status
			Implemented by	Supervised by	
		Rubble must not be dumped on site but must be placed within a bin for regular removal. Provide appropriate waste storage containers at construction sites. Recycle the construction waste and excavating waste as much as possible and the rest construction waste will be transported to an approved landfill. Hire a qualify contractor to remove all non-hazardous wastes from site to approved waste disposal site, according to appropriate domestic procedures. Hold contractors responsible for proper removal and disposal of any significant residual materials, wastes, and contaminated soils that remain on the site after construction. Strictly prohibit any waste incineration at or near construction site.			should be deposited in the corresponding waste storage place where signs and leakage prevention measures are in place. Environment supervisor should contact with the local authority designated agency before it is full. .
Chemicals and Hazardous Material	Hazardous and polluting materials from construction activities	Prepare and implement a protocol for the handling and disposal of hazardous materials during construction including a spill prevention and emergency plan. Build storage facilities for fuels, oil, chemicals and other hazardous materials will be within secured areas on impermeable surfaces, and provided with dikes. Vehicles and equipment will be properly staged in designated areas to prevent contamination of soil and surface water from chemicals and other hazardous materials. Vehicle, machinery and equipment maintenance and refueling will be properly carried out so that spilled materials do not seep into the soil.	Contractors, CSC	IA, Local EPB	Only few paints and fuels are stored in the warehouse within secured areas on impermeable surfaces. The warehouse is in good ventilation on the top and at the bottom, and together with good waterproof and shading measures. The outside of warehouse will be provided with 6 pieces of fire extinguishers and fire sandboxes. The contractors established emergency plan and exercised it in Sep 2015. Vehicles and equipment was properly staged in designated areas to prevent contamination of soil and

Category	Potential Impacts and Issues	Mitigation Measures and/or Safeguards	Responsibility		Implementation Status
			Implemented by	Supervised by	
		Oil traps will be provided for service areas and parking areas; and fuel storage and refilling areas will be located at least 300 m from drainage structures and important water bodies. Suppliers of chemicals and hazardous materials must hold proper licenses. They shall follow proper protocol for transferring fuel and the Operation Procedures for Transportation, Loading and Unloading of Dangerous or Harmful Goods of JT 3145-91.			surface water from chemicals and other hazardous materials. Vehicle, machinery and equipment maintenance and refueling was properly carried out so that spilled materials did not seep into the soil. The related activities are conformance to requirements.
Flora and Fauna	Protection of vegetation, re-vegetation of disturbed areas; planting and compensatory planting trees and grass	Preserve existing vegetation where no construction activity is planned, or temporarily preserve vegetation where activity is planned for a later date. The construction activities will be implemented within the land acquisition scope, minimize the damage to the nearby land. Properly backfill, compact, and re-vegetate piping/cable trenches after construction. Remove shrubs only as a last resort if they impinge directly on permanent structures. All natural areas impacted during construction must be rehabilitated with locally indigenous grasses. Construction activities must be planned carefully so as not to interfere with the calving and lambing season for most animal species. Enhance awareness on protection of and prohibition to hunt wild animals, construction workers are forbidden to hunt wild animals in the construction and surrounding areas, in accordance with PRC's Law on Wildlife Protection. Identify, demarcate and protect sites where small animals, reptiles, and birds of common species live.	Contractors, CSC	IA, Local EPB	The construction activities will be implemented within the land acquisition scope, Minimize activity to damage the nearby land, such as excavating in accordance with construction drawings, protecting the slope, and spraying recycled water to minimize dust etc. Remove shrubs only as a last resort if they impinge directly on permanent structures. All natural areas impacted during construction were rehabilitated with locally indigenous grasses. Construction activities were planned carefully so as not to interfere with the calving and lambing season for most animal species. Training for all new staff working on site which includes basic HSE knowledge and precautions was completed at July to August of 2015, and the normal training which includes updated HSE knowledge and skills according to

Category	Potential Impacts and Issues	Mitigation Measures and/or Safeguards	Responsibility		Implementation Status
			Implemented by	Supervised by	
					the project progress is ongoing, Hunting wild animals were prohibited in the construction and surrounding areas, in accordance with PRC's Law on Wildlife Protection. the related activities are conformance to requirements.
	Greening facilities for the plant site	Vegetate the CSP plant wherever possible.	Contractors, CSC	IA	Yes
Community Disturbance and Safety	Public safety around the construction site	Implement safety measures around the construction sites to protect the public, including warning signs to alert the public to potential safety hazards, and barriers to prevent public access to construction sites.	Contractors, CSC	IA, Local Public Transportation Bureau	The project entrance was secured by guards and barrier so that only authorized personnel can have access to premise.
Occupational health and safety	Health damage and accidents during construction activities	Identify and minimize the causes of potential hazards to workers. Implement safety measures and work procedures and provide first aid facility onsite. Workers should be thoroughly trained on occupational health and safety during construction, especially for using potentially dangerous equipment. Provide preventive and protective measures, including modification, substitution, or elimination of hazardous conditions. Contractors must ensure that all equipment is maintained in a safe operating condition. The Contractors will take all the necessary precautions against the spreading of disease. Material stockpiles or stacks, such as, pipes must be stable and well secured to avoid collapse and possible injury to site workers. Provide appropriate personal protective equipment	Contractors, CSC	IA, Local EPB, CGN	The contractors have established procedure to identify hazards and risk assessment,implement safety measures and work procedures and provided first aid facility onsite. Preventive and protective measures such as providing proper PPE, compiling HSE procedures, inspecting and monitoring the machines and facilities, and rectifying the hazards and risks on site etc were carefully taken by contractors, Appropriate personal protective equipment (PPE) has been provided to all workers to minimize risks, including ear protection, hard hats and safety boots. Adequate signage in risk areas where the petroleum, paint and diesel are stored, fire working place, high working place,

Category	Potential Impacts and Issues	Mitigation Measures and/or Safeguards	Responsibility		Implementation Status
			Implemented by	Supervised by	
		(PPE) to workers to minimize risks, including ear protection, hard hats and safety boots. Post adequate signage in risk areas. Provide procedures for limiting exposure to high noise or heat working environments in compliance with PRC noise standards for construction sites (GB12523-2011). Provide training to workers on the storage, handling and disposal of hazardous wastes. Provide emergency prevention, preparedness, and response arrangements and training to workers. Hold safety meetings with staff before each shift.			distribution boards, and excavation areas etc has been installed.Hold toolbox meeting daily.
Physical Cultural Resources	Relics may be damaged if proper precaution is not taken.	Establish and conduct chance-find procedures for physical cultural resources Relics destroying, damaging, defacing, concealing or otherwise interfering will bestrictly prohibited in accordance with PRC regulations. If a new site is unearthed, work should be stopped immediately and the IA and local cultural relic bureau will be promptly notified; construction will resume only after a thorough investigation and with the permission of the appropriate authority.	Contractors, CSC	IA and CGN	The contractors have established a procedure to reflect the issue. During the reporting period, there was no any relics found.
C. Operation Phase: Not applicable during this reporting period					

DI = design institute, EIA = environment impact assessment, EMP = environment monitoring plan, EMS = environment monitoring station, EPB = environment protection bureau, GRM = grievance redress mechanism, CSP =concentrated solar thermal plant, IA = implementing agency, km = kilometer, LB = labor bureau, m = meter, mg = milligram, m^3 = square meter, PRC = the People's Republic of China, SO_2 = sulfur dioxide.

IV. ENVIRONMENTAL MONITORING

16. This section presents the progress of environmental monitoring framework in details and the summary of environmental monitoring results.

A. Implementation of Environmental Monitoring Program

17. An environment monitoring plan (see Table 6) is developed to monitor the environmental impacts of the project, particularly assessing (i) the extent and severity of actual environmental impacts against the predicted impacts and baseline data collected before the project implementation, (ii) performance or effectiveness of environmental mitigation measures or compliance with pertinent environmental rules and regulations, (iii) trends in impacts, (iv) overall effectiveness of EMP implementation, and (v) the need for additional mitigation measures and corrective actions if non-compliance is observed. The EMP monitoring plan covers air, wastewater, solid waste, and noise parameters during construction as well as operation of the project.

18. The project environmental monitoring plan describe the standard monitoring methods, detection limits, and the standard code for each monitoring parameter (seeTable 5).

a. Wastewater

19. Wastewater collection basins and sediment traps are equipped in concrete batching station area. The construction wastewater, after sedimentation, has been used as the spraying water for fugitive dust control on the construction site. The domestic wastewater from workers camp is equipped with water collection basins and is cleaned up timely by local environment monitoring station .The water quality data of the project area is monitored pH, SS, oil by the Shanxi jingchen monitoring technology CO.,LTD, during construction phase monthly.

b. Ambient air

20. The ambient air quality data of the project area is monitored monthly. The contractors have water trucks to spray water on construction sites and earth/material handling routes every day. Construction materials (sand, gravel, and rocks) and spoil materials are transported trucks covered with tarpaulins. Storage piles are at least 30m downwind of the nearest human settlements. All vehicles (e.g., trucks, equipment, and other vehicles that support construction works) are well maintained and not emit dark, smoky or other emissions in excess of the limits.

c. Noise

21. The noise from equipment and machinery was main noise resource, and was no more than 60db in the daytime, and below 50db at night. The area where this CSP project locate depopulated zone, so it has the noise have no influence on surrounding community. The noise complied with the standard GB12523-2011 etc. The noise data of the project area will be monitored by Shanxi jingchen monitoring technology CO.,LTD.

d. Construction spoil disposal

22. Spoils are safely disposed and managed with minimum environmental damage because the Environmental Protection Administration of Delingha has inspected the site and gave a good result in Oct 2015. Designated temporary areas where set up HSE signs for spoil disposal on site and re-use of excavated materials for landfill.

Table 5: Monitoring Parameters and Methods

Media	Monitoring Parameter	Method (Standard No.)	Standard Limit
Air	TSP (mg/m^3)	Gravimetric (GB/T15432-1995)	0.30[1]
	PM_{10} (mg/m^3)	Gravimetric with specific sampler (HJ/T93-2003)	0.15
	NO_x (mg/m^3)	Saltzman Method (GB/T15435-1995)	0.12
Noise	Equivalent Continuous A Sound (Leq)	Acoustimeter Method (GB12524-90)	60 (day)/ 50 (night)
Surface water	pH value	Glass electrode method (GB6920-86)	6-9[2]
	COD_{Mn}(mg/L)	Permanganate index (GB11914-89)	6
	Petroleum (mg/L)	Infrared spectra photograph (GB/T16488-1996)	0.05
	SS (mg/L)	Gravimetric method (GB11901-89)	250
	Total coliforms (no./L)	Membrane filter (GB/T575.12-2006)	10,000

COD = chemical oxygen demand, mg/L = milligram per liter, mg/m^3 = milligram per cubic meter, PM_{10} = particulate matter smaller than 10 micrometers, SS = suspended solid, TSP = total suspended particulate.
Source: PRC standards.

Table 6: ENVIRONMENTAL MONITORING PLAN

Subject	Parameter	Location	Frequency	Implemented by	Supervised by	Implementation Status
A. Construction Phase						
Wastewater generated from construction	Inspection of wastewater mitigation measures (water collection basins and sediment traps, etc.)	The construction site	Waste water effluent sites, Daily	Contractors, CSC,	IA andCGN	Complied and the results were accepted
	pH, SS, oil	The construction site	One sampling each day each time, monthly	Local EMS	IA, Local EPB	Complied and the results were accepted

[1] All the air parameters are Grade II ambient air standards (daily average).
[2] All the water parameters are Grade III standards.

Subject	Parameter	Location	Frequency	Implemented by	Supervised by	Implementation Status
Ambient air	Ambient air monitoring; Inspection of dust mitigation measures (water spraying, cover transport vehicles, etc); and Inspection of maintenance and condition of vehicles and construction equipment.	The construction site and nearby areas	Monthly; Daily when there are construction activities.	IA, Contractors, CSCs	IA, Local EPB	Complied and the results were accepted
Noise	Leq dB(A)	All sensitive receivers nearby construction site	Monthly: a day each time and two samples; once during daytime, once during nighttime.	IA, Contractors, CSCs	Local EPB	Complied and the results were accepted
Construction spoil disposal	Spoil waste	Construction waste disposal sites.	At the onsite of construction; Once a year; and once after completion of spoil disposal	Local EPB	CGN	Complied and the results were accepted
B. Operation Phase (Not applicable)						

CNY = Chinese yuan, CSC = construction supervision company, CSP = concentrated solar thermal plant,dB = decibel, EMS = environment monitoring station, EPB = environment protection bureau, IA = implementing agency, Leq = equivalent continuous noise level, NO_2 = nitrogen dioxide, pH = potential hydrogen, PM = particulate matter, SO_2 = sulfur dioxide.
[a]During the detailed engineer designing phase, all the features of the wastewater facility will be confirmed. Based on the confirmation, the monitoring location and frequency will be reviewed and revised if necessary.
Source: Domestic environment assessment report and TA consultants estimate.

B. Monitoring Results

23. Monthly monitoring reports were prepared during July to December 2015. The following tables show monitoring results in various parameters.

a. Ambient air

Monitoring Date	Monitoring Site	PM10 Daily mean value μg/m^3	TSP Daily mean value μg/m^3
2015-11-24	No1. Office Building	80	176
2015-11-25	No1. Office Building	105	193
2015-11-26	No1. Office Building	69	165
2015-11-27	No1. Office Building	85	182
2015-11-28	No1. Office Building	103	205
2015-11-29	No1. Office Building	125	253
2015-11-30	No1. Office Building	114	223

b. Waste Water

Monitoring Date	Monitoring Site	PH (ph value)	Suspended solids (mg/L)	
2015-11-29	NO.1 sewage outlet	6.84	30	0.04
2015-11-30	NO.1 sewage outlet	6.79	35	0.05

c. Noise

Monitoring Date	Monitoring Site	Day time	Night Time
2015-11-28	North, East, South, West site boundaries	38.5~43.8	34.3~37.6
2015-11-29	North, East, South, West site boundaries	40.2~45.4	33.7~35.5

V. GREIVANCE REDRESS MECHANISM

24. A project-level grievance redress mechanism (GRM) was developed in accordance with the ADB's SPS requirement so to receive and facilitate resolution of affected person's concerns and complaints about the project's environmental performance during construction as well as operation phase of the project. The project GRM includes a procedure for receiving grievances, recording/ documenting key information, and evaluating and responding to the complainants in a reasonable period of time. Any concerns raised through the GRM will need to be addressed promptly and transparently.

25. Mr.junqing wang, has been designated as a focal person of the project GRM. His contact number is +8613401077992. His contact information (see figure below) has been posted on site information boards . During this reporting period, no complaint was received.

Figure 1. Signboard with Contact Details

VI. PUBLIC CONSULTATION AND INFORMATION DISCLOSURE

26. The IA invited deputy director of Qinghai Development and Reform Commission (DRC) and other officers to CSP project site. The site manager introduced this project program and positive environmental benefits. Qinghai DRC indicated that, the government will support this project strongly. In addition, the IA monthly communicates with many departments of Qinghai government, nearby communities keruke town government to introduce this project program and positive environmental benefits at Oct of 2015. The public welcome this project to build at the Delingha. We had Questionnaire for the environmental impact around the enterprise at Dec of 2015,There is no complaint handling until now, the IA keeps good cooperation and communication with local communities.

1.

27. The project information including the project layout drawing, process flow diagram, values and signification of project, project HSE goals etc is disclosed for public, sign boards is provided on-site to guide public understanding with project description and project benefits.

Figure 2. Project information posted

28. We had Questionnaire for the environmental impact around the enterprise at Dec of 2015 as below:

企业周边环境影响调查表

Questionnaire for the Environmental Impact around the Enterprise

尊敬的先生、女士：

Dear Gentlemen and Ladies:

您好！

Hello!

中广核太阳能德令哈有限公司诚挚的邀请您参加本次调查，旨在了解我公司在日常建设过程中对您及您的家人或所在单位，在生活、工作中是否造成环境类的影响，以便我公司做出相应的整改，共同担负起保护环境的社会责任。您的意见我公司会高度重视，感谢您的配合！

We, Delingha Limited Company of CGN cordially invite you to participate in this survey and this survey aimed to investigate whether the daily construction has an impact to you and your families or your company as well as to your life& work so that we can rectify and improve and jointly take the responsibility to protect the environment.

Your comments will be highly appreciated by our company, thank you for your cooperation!

一、被调查人基本信息 The Basic Information of Investigated

1、 您的性别 Your Gender：男 Male☐ 女 Female☑

2、 您的年龄 Your Age：20 周岁以下 Under the age of 20☑ 20~30 周岁 20~30 Years Old☐ 30~40 周岁 30~40 Years Old☐ 40~50 周岁 40~50 Years Old☐ 50 周岁以上 Over 50 Years Old☐

3、 您的身份 Your Identity：周边企业职工 Employee of Surrounding Enterprise ☑周边居民 Residents in the surrounding area☐周边个体商贩 Individual Peddler in the surrounding area ☐ 政府部门 Government Department☐

4、 您所在位置与公司距离 Distance between your location and our company：100 米以内 Within 100Meters ☐ 100~500 米 100~500Meters☐ 500~1000 米 500~1000Meters☐ 1000~5000 米 1000~5000Meters☐ 5000 米以上 More than 5000 Meters☑

二、调查项目 Survey Item

1、 您是否了解我公司所属行业或产品信息？Do you know about our industry or product information? 是 Yes☑ 否 No☐

2、 我公司建设过程中的粉尘排放是否对您有影响？ Whether the dust emission produced from the common construction activity has an impact to your life? 是 Yes☐ 否 No☑

影响程度 Impact：轻微 Slight☐ 较小 Minor☑ 一般 General☐ 较大 Greater☐ 严重 Severe☐

3、 您是否发现过我公司私自向周边环境排放污水？Whether you find our company discharging the sewage around the enterprise? 是 Yes☐ 否 No☑

4、 我公司的污水排放是否对您的工作、生活造成影响？ Whether the discharge of sewage has an impact to your life& work? 是 Yes☐ 否 No☑

影响程度 Impact：轻微 Slight☑ 较小 Minor☐ 一般 General☐ 较大 Greater☐ 严重 Severe☐

5、 您是否发现我公司乱倒危险废弃物？Whether you find our company dumping the hazardous waste? 是 Yes☐ 否 No☑

油漆桶 Paint Bucket☐有毒化学品容器 Toxic Chemical container☐打印机色带、墨盒、硒鼓 Printer Ribbon, ink cartridge, selenium drum☐紫外灯管 UV Lamp☐电子元件 Electric Component☑

6、 我公司建设过程中的噪声是否对您的工作、生活造成影响？Whether the construction noise has an

impact to your life& work?　　是 Yes□　　否 No□✓

噪声来源 Noise Sauce：机械设备 Mechanical Equipment□　　运输车辆 Transport Vehicles□

影响程度 Impact：轻微 Slight□　　较小 Minor□　　一般 General□　　较大 Greater□　　严重 Severe□

影响时段 Influencing Period：6:00~12:00□　　12:00~18:00□　　18:00~0:00□　　0:00~6:00□

7、 您是否发现我公司向周边范围私自倾倒建筑垃圾？Whether you find our company dumping the domestic garbage around the site without permission?

是 Yes□　　否 No□✓

污染物质 Polluting material：碎纸屑、尘 shredded Paper □　　金属垃圾 Metal Waste□　　塑料废品 Plastic Scrap□　　电器线路 Electric Apparatus□　　建筑垃圾 Construction Waste□

8、 您是否发现我公司向周边范围私自倾倒生活垃圾？　　是 Yes□　　否 No□✓

Whether you find our company dumping the domestic garbage around the site without permission?

污染物质 Polluting material：食物残渣 Food Residue□　　食堂泔水 Cafeteria Swill □　　办公废品 Office Waste□　　生活污水 Domestic Sewage□

9、 公司食堂油烟是否对您的工作、生活造成影响？　　是 Yes□　　否 No□✓

Whether the canteen oil smoke has an impact on your life& work?

10、您发现我公司其他环境污染 If you find other environment pollution caused by our company?：

是 Yes□　　否 No□✓

二、 要求或建议：Suggestion or requirement:

1、 您对我公司关于环境保护方面还有哪些要求或建议？

Any suggestion or requirement you have for the environment protection of our company?

2、 您对我公司环境保护工作的总体评价

Welcome to list your overall evaluation for our company' s environment protection work.

不满意 Unsatisfactory□　　较满意 Satisfied□　　满意 Satisfactory□✓

调查日期 Date:　　年 Year　　月 Month　　日 Day

VII. INSTITUTIONAL STRENGTHENING AND TRAINING

29. To strengthen the capacity of the EA and IA for EMP implementation, the following training programs were carried out. The training topics, contents, estimated budgets and number of participants are listed in Table 7. Environmental consultants will be responsible for developing training materials and providing training along with technical experts. However, during this reporting period, the site entering HSE training was conducted, all of the new workers on site have accepted the HSE training and pass the examination. The same job will be done in the future, and the normal training for workers on site will be done by HSE engineer according to the progress of project.

Table 7: Institutional Strengthening and Training Program

Training	Attendees	Trainers	Contents	Times	Period (days)	Number of Person
ADB's and PRC's environmental laws, regulations and policies	IA, contractors	Environmental consultant	ADB's safeguard policy statement Project applicable PRC's environmental laws, policies, standards and regulations International environmental management practice in civil constructions	2	1	10
Grievance Redress Mechanism	IA, Local EPB, residential communities, and Stakeholders	Environmental consultant	GRM structure, responsibilities, and timeframe Types of grievances and eligibility assessment	2	1	10
Implementation of environment monitoring plan	IA, contractor, CSC	Environmental consultant	Impacts and mitigation measures during construction and operation Monitoring and auditing mechanism Reporting requirements Corrective actions for EMP	4	1	15
International good practices of operating CSP plant	IA	Environmental consultant	Environmental, health and safety issues associated with CSP and best practices of operation and maintenance of CSP and new solar energy technologies	2	2	10 20
		Total		**10**	**5**	**45**

ADB = Asian Development Bank, CSC = construction supervision company, GRM = grievance redress mechanism, IA = implementing agency, PRC = People's Republic of China.

VIII. KEY ENVIRONMENTAL ISSUES

A. Key Issues Identified

None

B. 1.Action Taken to mitigate key environmental issues

None

C. Action Required

None

IX. CONCLUSIONS

30. As the project just finished the Enclosing wall construction, there is no environmental issue in this stage.
31. Any adverse environmental impacts associated with the project are prevented, reduced, minimized.
32. With the implementation of the mitigation measures defined in the IEE, the adverse impacts are reduced to acceptable levels, and zero environment incident at present.