North-West Power Generation Company Limited

Annual Public Environmental and Social Report (2017-18)

Sirajganj 225 MW Combined Cycle Power Plant (Dual Fuel - 3rd Unit)

October - 2018

1. About the Project:

The configuration of the Sirajganj 225 MW Combined Cycle Power Plant (Dual Fuel - 3rd Unit) is multi shaft 1:1:1 consisting of one gas turbine, one HRSG and one steam turbine with by-pass stack for simple cycle operation. Natural Gas is the main fuel and HSD oil as alternative fuel. The guaranteed net output of the each power plant is 220 MW.

The following equipment are belong to Sirajganj 225 MW Combined Cycle Power Plant (Dual Fuel - 3rd Unit):

1) Gas Turbine
2) Steam Turbine
3) Generators
4) Heat Recovery Steam Generator (HRSG)
5) Gas Booster Compressor
6) 230kV Switchyard in Power Plant area
7) 230kV bay at the existing Sirajganj 230kV Switching station under PGCB
8) Underground 230 kV transmission line for power evacuation
9) Water treatment system (combined for 2nd and 3rd Unit)
10) Cooling Water System
11) Stacks (main and bypass) etc.

Natural gas or High Speed Diesel will be used as fuel for Gas turbine which will be coupled with Generator to produce around 150 MW electricity. The requirement of Natural Gas for this two Power Plant is about 35 MMCFD. Natural Gas will be supplied to the proposed power plant by Paschimanchal Gas Co. Ltd. (a Company of Petrobangla). The exhaust gas temperature of gas turbine will be about 500-600 degree Celsius. The exhaust gas with high temperature will be passed through Heat Recovery Steam Generator (HRSG) in which groundwater will be fed after treatment (demineralization & desalination) to produce the steam and then the steam will be passed through steam turbine coupled with generator to produce electricity of about 75 MW. The temperature of the flue gas will be about 90 degree Celsius. The flue gas will be discharged to the atmosphere through main stack of adequate height.

The output voltage of the generators will be stepped up to 230 kV through a Step-up Transformer, to be installed close to generator outlets. This high voltage (230 kV) supply will be connected to the existing 230 kV Switching Station of PGCB through 230 kV underground cables.

2. Environmental Law

NWPGCL has been complied all the national and international environmental law. The details have been depicted in ESIA report. (http://www.nwpgcl.org.bd/en/pages/eia-report)

3. Social Law

NWPGCL has been complied all the national and international social law. The details have been depicted in ESIA report. (http://www.nwpgcl.org.bd/en/pages/eia-report)

4. Environmental and Social Permit

SL#	Name of the Permits	Organizations
1.	Trade License	Dhaka City Corporation
2.	Permission for Jetty	BBA
3.	Site Clearance	DoE
4.	EIA	DoE
5.	Permission of Acid/alkali Storage	Explosive Department
6.	License for Fire Permit	Fire Service
7.	License for Storage of CO2 (if required)	Explosive Department
8.	License for Storage of Diesel	Explosive Department
9.	License for Boiler	Chief Inspector of Boiler
10.	License for Propane Cylinder Storage (if required)	Explosive Department
11.	License for Compress Cylinder Storage (if required)	Explosive Department

5. Environmental and Social Action Plan

Depicted at ANNEX-A.

6. IFC Standards

NWPGCL has been complied IFC standards. The details have been depicted in ESIA report. (http://www.nwpgcl.org.bd/en/pages/eia-report)

7. The Equator Principles

NWPGCL has been complied Equator Principles. The details have been depicted in ESIA report. (http://www.nwpgcl.org.bd/en/pages/eia-report)

8. The EHS Guidelines

NWPGCL has been complied EHS guideline of IFC. The details have been depicted in ESIA report. (http://www.nwpgcl.org.bd/en/pages/eia-report)

9. ADB's Safeguard Policy Statement, 2009

The project is not funded by ADB

10. Basic Terms and Conditions of Employment

NWPGCL has an approved HR policy which is followed by all employees.

11. Core Labour Standards

NWPGCL has an approved HR policy which is complying national labour law

12. Community Engagement Programs

Depicted at ANNEX-B.

ANNEX – A

Update of Environmental and Social Action Plan

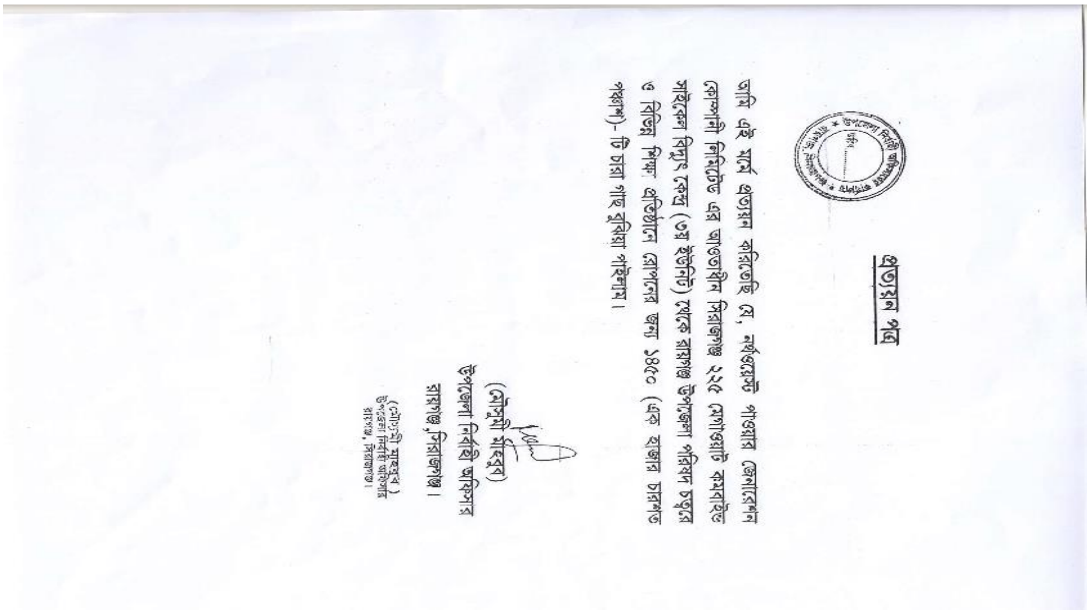
S. No (A)	Element (D)	Deliverable (E)	Responsibility	Timeline (F)
1	Submit declaration for implementation of ESMS and revised ESHIA	Declaration Letter from NWGPCL	NWPGCL	Condition Precedent
2	Environment & Social Management Plan (ESMP) to be developed by the EPC for the project taking into consideration ESMS of NWPGCL, EHSIA Environment & Social Management & Monitoring Plan and its subsequent revisions (if any).	ESMP	EPC	Condition Precedent
3	NWPGCL to appoint Environment & Social Head at the corporate level	NWPGCL to prepare a job description and appointment date for E&S Manager	NWPGCL	Condition Precedent
4	Unit-3 EHS and social reporting to corporate should be provisioned, by means of developing terms of reference/job description for EHS Manager for the Unit-3.	Job description of EHS Manager of Unit-3	NWPGCL	Condition Precedent
5	A specific training plan should be established specifying training requirements, definition of training sessions, duration, frequencies, syllabus, and verification of training programs through feedback forms. Training calendar to be developed in line with requirements of ESMS and ESHIA for construction and operation phase.	Develop a training calendar	NWPGCL&EPC	Condition Precedent
6	EPC organogram to detail position for EHS and Social Officer before start of construction works.	Contractor organogram and appointment letters	Contractor	Condition Precedent
7	Identify and finalize independent organization who will responsible for implementation of environment monitoring compliance plan and EMP	Appointment of third party consultant	NWPGCL&EPC	Condition Precedent
8	Contractor agreements to incorporate review of EHS and Social performance of EPC of Unit-3 in line with ESMS and EHSIA	Formal communication from NWPGCL to EPC and EPC agreement to the same	NWPGCL&EPC	Condition Precedent
9	Develop Stakeholder Engagement Plan as per Performance Standard 1 and ESMS requirements	NWPGCL&EPC to prepare and Lenders to approve Stakeholder Engagement Plan	NWPGCL&EPC	Condition Precedent
10	EPC to comply with Performance Standard 2 requirements such as prohibition of child and forced labour at work place, payment of wages, working hours etc. Workers accommodation to be provided as per IFC Performance Standards 2 requirements and time bound monitoring of quality of accommodation provided and basic services to be reviewed.	Formal communication from NWPGCL to EPC and EPC agreement to the same	NWPGCL&EPC	Condition Precedent

S. No (A)	Element (D)	Deliverable (E)	Responsibility	Timeline (F)
11	During the construction phase, undertake semi annual labor audits of contractors and sub-contractors.	Labour Audit report as a part of the E&S monitoring report	NWPGCL&EPC	Attachment 1
12	Workers and community grievance management procedure to be developed and implemented as per Performance Standard 1 requirements.	NWPGCL&EPC to prepare and Lenders to approve Grievance redress mechanism	NWPGCL&EPC	Condition Precedent
13	Provision of occupational health centre and medical examination of workers during construction phase to be ensured by EPC in line with ESMS and ESHIA requirements	Formal communication from NWPGCL to EPC and EPC agreement to the same	NWPGCL&EPC	Condition Precedent
14	i) NWPGCL required to report publicly on an annual basis on GHG emission levels during the operational phase for the project. The company should disclose their GHG emissions annually through corporate reports, or through other voluntary disclosure which specifies details project level emissions on annual basis. ii) NWPGCL should strive for technically and financially feasible and cost effective options available to reduce project-related GHG emissions during the design, construction and operation of the Project.	i) Develop mechanism for GHG quantification ii) GHG Evaluation Report / MoM of technical design meetings	NWPGCL	To be reviewed on an ongoing basis as a part of the Semi annual/annual site visits and reporting by Lender's E&S consultant
15	Adequacy and efficiency assessment of the CETP shall be provided before installation with identification of critical equipment for operations and its preventive maintenance schedule	Adequacy and efficiency assessment report/ technical design documents of ETP when finalized	NWPGCL	To be reviewed on an ongoing basis as a part of the Semi annual/annual site visits and reporting by Lender's E&S consultant
16	NWPGCL should maintain minutes of meetings conducted with their stakeholders and should consider including the stakeholders in regular training exercises (e.g., simulations, drills, and debriefs of exercises and actual events) to familiarize them with proper procedures in the event of an emergency	Records of minutes of meetings	NWPGCL	To be reviewed on an ongoing basis as a part of the Semi annual/annual site visits and reporting by Lender's E&S consultant
17	Ensure that there is no office or labour camp around the RMS station and within a radius of at least 200m from the RMS station.	NWPGCL to prepare and Lenders to approve general drawings from lenders for labour and officer accommodation	NWPGCL&EPC	To be reviewed on an ongoing basis as a part of the Semi annual/annual site visits and reporting by Lender's E&S consultant

ANNEX – B

Community Engagement Programs

1. NWPGCL has distributed 1800 nos. of sapling at Raiganj Upazila and Sirajganj Sadar Upazila under Sirajganj District. These sapling were handed over to Upazila Nirbahi Officers of Raiganj Upazila and Sirajganj Sadar Upazila.



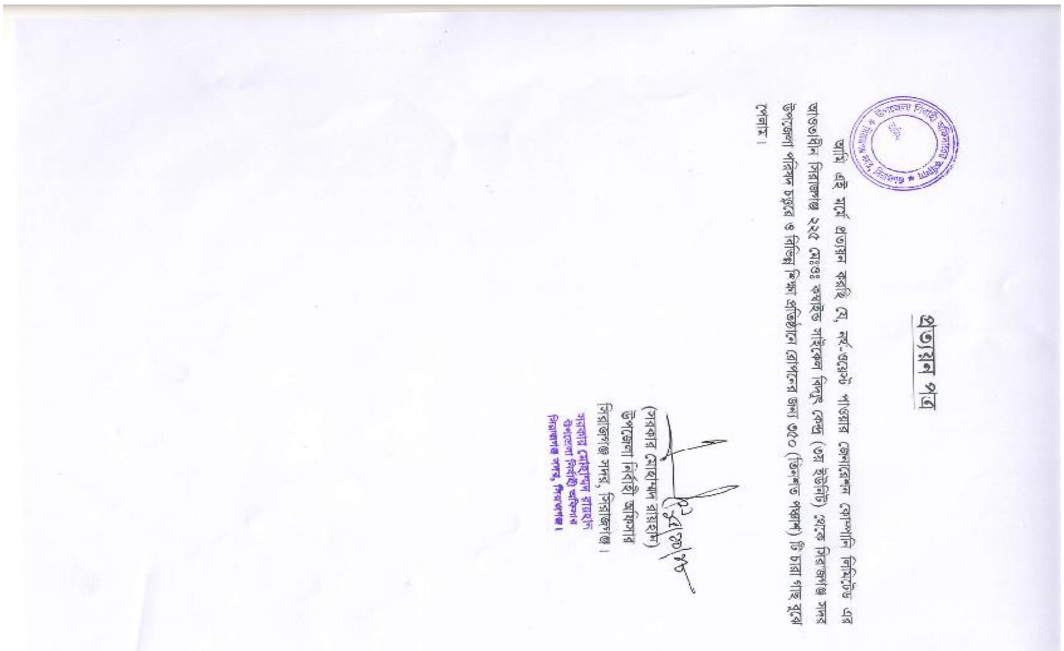
প্রত্যয়ন পত্র

আমি এই মর্মে প্রত্যয়ন করিতেছি যে, নর্থওয়েস্ট পাওয়ার জেনারেশন কোম্পানী লিমিটেড এর আওতাধীন সিরাজগঞ্জ ২২৫ মেগাওয়াট কমবাইন্ড সাইকেল বিদ্যুৎ কেন্দ্র (৩য় ইউনিট) থেকে রায়গঞ্জ উপজেলা পরিষদ চত্বরে ও বিভিন্ন শিক্ষা প্রতিষ্ঠানে রোপনের জন্য ১৪৫০ (এক হাজার চারশত পঞ্চাশ)- টি চারা গাছ বুঝিয়া পাইলাম।

(মৌসুমী মাহবুব)
উপজেলা নির্বাহী অফিসার
রায়গঞ্জ, সিরাজগঞ্জ।

(মৌসুমী মাহবুব)
উপজেলা নির্বাহী অফিসার
রায়গঞ্জ, সিরাজগঞ্জ।

Acknowledgement letter from Upazila Nirbahi Officer of Raiganj Upazila for 1450 Nos. Sapling.



প্রত্যয়ন পত্র

আমি এই মর্মে প্রত্যয়ন করছি যে, নর্থ-ওয়েস্ট পাওয়ার জেনারেশন কোম্পানি লিমিটেড এর আওতাধীন সিরাজগঞ্জ ২২৫ মেঃওঃ কম্বাইন্ড সাইকেল বিদ্যুৎ কেন্দ্র (৩য় ইউনিট) থেকে সিরাজগঞ্জ সদর উপজেলা পরিষদ চত্বরে ও বিভিন্ন শিক্ষা প্রতিষ্ঠানে রোপনের জন্য ৩৫০ (তিনশত পঞ্চাশ) টি চারা গাছ বুঝে পেলাম।

(সরকার মোহাম্মদ রায়হান)
উপজেলা নির্বাহী অফিসার
সিরাজগঞ্জ সদর, সিরাজগঞ্জ।

সরকার মোহাম্মদ রায়হান
উপজেলা নির্বাহী অফিসার
সিরাজগঞ্জ সদর, সিরাজগঞ্জ।

Acknowledgement letter from Upazila Nirbahi Officer of Sirajganj Sadar Upazila for 350 Nos. Sapling.


গাছ লাগান
বৃক্ষরোপণ কর্মসূচী-২০১৮
সিরাজগঞ্জ জেলার উপজেলা নির্বাহী অফিসার, সদর
এবং উপজেলা নির্বাহী অফিসার, রায়গঞ্জ
মহোদয়ের মাধ্যমে ২০০০ গাছের চারা বিতরণ
আয়োজনেঃ
NORTH-WEST
POWER GENERATION
COMPANY LIMITED
ISO 9001:2015, ISO 14001:


গাছ লাগান
পরিবেশ বাঁচান
বৃক্ষরোপণ কর্মসূচী-২০১৮
সিরাজগঞ্জ জেলার উপজেলা নির্বাহী অফিসার, সদর
এবং উপজেলা নির্বাহী অফিসার, রায়গঞ্জ
মহোদয়ের মাধ্যমে ২০০০ গাছের চারা বিতরণ
আয়োজনেঃ
NORTH-WEST
POWER GENERATION
COMPANY LIMITED
সিরাজগঞ্জ ২২৫ মেঃ ওঃ কম্বাইন্ড সাইকেল বিদ্যুৎ কেন্দ্র (ডুয়েল ফুয়েল- ৩য় ইউনিট), সয়দাবাদ, সিরাজগঞ্জ।
নর্থ-ওয়েস্ট পাওয়ার জেনারেশন কোঃ লিঃ
ISO 9001:2015, ISO 14001:2015 & ISO 45001:2018 Certified
(বাংলাদেশ বিদ্যুৎ উন্নয়ন বোর্ডের একটি অঙ্গ প্রতিষ্ঠান)

2. NWPGCL has constructed submersible water pump, reservoir tank, pipeline for girls' wash room of Soydabad High School near power plant area.


Corporate Social Responsibility (CSR)
Of
North-West power Generation Company Limited
(An Enterprise of Bangladesh Power Development Board)
Sirajganj 225 MW Combined Cycle Power Plant, Soydabad, Sirajganj.
Place: Soydabad High School, Soydabad


Corporate Social Responsibility (CSR)
Of
North-West power Generation Company Limited
(An Enterprise of Bangladesh Power Development Board)
Sirajganj 225 MW Combined Cycle Power Plant, Soydabad, Sirajganj.
Place: Soydabad High School, Soydabad.
Activities: Installation of Submersible Pump and Water Supply in Girl's Washroom.

Attachment 1

2nd ENVIRONMENTAL, HEALTH, SAFETY AND SOCIAL COMPLIANCE AUDIT

2nd ENVIRONMENTAL, HEALTH, SAFETY AND SOCIAL COMPLIANCE AUDIT

CONSTRUCTION PHASE

Sirajganj 225MW Combined Cycle Power Plant Project (Dual Fuel-3rd Unit)

FINAL REPORT: August 2018

PREPARED FOR: NORTH-WEST POWER GENERATION COMPANY LIMITED (NWPGCL)

PREPARED BY: ENVIRONMENTAL QUALITY AND MANAGEMENT SYSTEM (EQMS)

NORTH-WEST POWER GENERATION COMPANY LIMITED (NWPGCL)

2nd ENVIRONMENTAL, HEALTH, SAFETY AND SOCIAL COMPLIANCE AUDIT

CONSTRUCTION PHASE

SIRAJGANJ 225MW COMBINED CYCLE POWER PLANT PROJECT (DUAL FUEL-3RD UNIT)

EQMS Reference # 0017820012

Version 2:
FINAL: Aug 2018

Reviewed &
Approved by:

Kazi Farhed Iqubal
Executive Director

Contents

ABBREVIATIONS

ALARP	As-Low-As-Reasonably-Practicable
AoI	Area of Influence
BIWTA	Bangladesh Inland Water Transport Authority
BPDB	Bangladesh Power Development Board
CAP	Corrective Action Plan
CCB	Central Control Building
CCGT	Combined Cycle Gas Technology
CCPP	Combined Cycle Power Plant
CDO	Community Development Officer
CEMS	Continuous Emission Monitoring System
CLO	Community Liaison Officer
PMU	Project Implementation Unit
CO	Carbon Monoxide
COC	Cycles of Concentration
CSR	Corporate Social Responsibility
CW	Cooling Water
CMC	China National Machinery Import & Export Corporation
DLAO	District Land Acquisition Officer
DLN	Dry Low NOx
DoE	Department of Environment
EHS	Environment, Health and Safety
EHS&S	Environment, Health, Safety and Social
EPC	Engineering, Procurement and Construction
ERM	Environmental Resources Management
ERP	Emergency Response Plan
EIA	Environmental Impact Assessment
ESIA	Environmental and Social Impact Assessment
ESMMP	Environmental and Social Management and Monitoring Plan
ESMS	Environmental and Social Management System
FY	Financial Year
GIIP	Good International Industry Practices
GoB	Government of Bangladesh
GRM	Grievance Redress Mechanism
GSA	Gas Supply Agreement
GT	Gas Turbine
GTG	Gas Turbine Generator
HR	Human Resources
HRSG	Heat Recovery Steam Generator
HSD	High Speed Diesel
IFC	International Finance Corporation
ISO	International Organization for Standardization

L&FS	Life and Fire Safety
LLA	Land Lease Agreement
LOTO	Lock-Out/ Tag-Out
NEPC	First Northeast Electrical Power Engineering Co
NOC	No Objection Certification
NOx	Oxides of Nitrogen
NWPGCL	North-West Power Generation Company Limited
OHSAS	Occupational Health and Safety Management System
PGCB	Power Grid Company of Bangladesh Limited
PM	Particulate Matter
PPA	Power Purchase Agreement
PPE	Personnel Protective Equipment
PS	Performance Standards
PSMP	Power System Management Plan
RFP	Request for Proposal
SEP	Stakeholder Engagement Plan
SOP	Standard Operating Procedure
SPS	Safeguard Policy Statement
ST	Steam Turbine
STG	Steam Turbine Generator
TBT	Tool Box Talk
TSS	Total Suspended Solids
WB	The World Bank
WHO	World Health Organization

EXECUTIVE SUMMARY

EQMS Consulting Limited was commissioned by North-West Power Generation Company Limited to conduct 4th Independent environmental, health, safety and social compliance audit of 225 mw combined cycle power plant project (dual fuel-3rd unit) in Bangladesh which is currently under the construction phase.

The EHS&S compliance audit was performed in the context of the IFC Performance Standards and local regulatory requirements to identify gaps and to provide corrective actions in order to comply with the applicable standards.

The gap assessment with respect to applicable standards primarily focuses on the construction phase environmental and social management plan (ESMP) developed as part of the ESIA study, Project level environmental, health, safety and social policies, procedures and plans as being developed by NWPGCL and the EPC contractor as well as their implementation on ground. Furthermore, the aspects related to the construction phase of the Project and linked management plans have been referred in order to provide the context of project's EHS&S management planning during the operation phase.

The assessment has been presented in Section 1-2 and 1-3 with a Corrective Action Plan (CAP) in Section 2-1 to address the identified gaps.

1. INTRODUCTION

1.1 BACKGROUND

Environmental Quality and Management System (EQMS) was commissioned by Northwest Power Company Limited (NWPGCL) to conduct 5 Independent Environmental, Health, Safety and Social Compliance Audit (''the Audit") of the Sirajganj 225mw combined cycle power plant project (dual fuel-3rd unit) (hereafter referred as "the Project"), in Bangladesh, which is currently under construction. The Project is a 225 MW duel fuel combined cycle power plant (CCPP) was established adjacent to the 2nd unit of the Sirajganj Power Station (SPS) which is also under construction. The site is located at about 15 km south-east of Sirajganj town, about 130 km north-west of Dhaka and 1.8 km south-west from the western end of Bangabandhu bridge. The proposed Plant will be built on 7.5 acres of land. The major components include a 150 MW gas turbo generator (GTG) with a bypass stack of 60 meter high, one horizontal type HRSG with a main stack of 60 meter high for outdoor installation and a heavy duty condensing type Steam Turbo--Generator (STG) for indoor installation in the configuration of 1:1:1, feed water pumps, condensate extraction pumps, cooling towers, 230 KV plant sub-station, transformers, gas Regulating Metering Station (RMS), Central Effluent Treatment Plant (CETP), Water Treatment Plant (WTP), administration building, workshop, warehouse, guard houses, internal roads, etc.

OBJECTIVES AND SCOPE OF WORK

The overall high level objective of the EHS and Social Compliance Audit during construction phases of the Project is provided as follows:

a) To assess the Project's compliance with the environment, health, safety and social (EHS&S) requirements of the audit framework (described subsequently);
b) To review the environmental and social impact assessment report and management plans prepared for the Project and effectiveness of implementation of mitigation measures and monitoring programmes at site;
c) To review the ecology/migratory impact, impact on the Jamuna river, impact on the underlying ground water, dust emissions, traffic and transport management, health and safety, protection of labour force, during construction phases of the Project;
d) To review the implementation of the social issues in relation for the Project including SEP and Grievance Mechanism ;
e) To provide objective reports to the prospective international lenders confirming compliance and if nor, recommending corrective actions, as appropriate to the Project;

f) To review the company's existing management system, standard operating procedures (SOPs) and training in relation to EHS&S and identification of areas for improvement/ enhancement;
g) To review the health and safety records of site and compliance with respect to the site specific safety management system adopted by the EPC contractor and the company; and
h) To prepare environmental and social action plan (ESAP) identifying the gaps/ issues, recommendations, time frame for implementation and priorities.

1.2 COMPLIANCE AUDIT FRAMEWORK AND EVALUATION CRITERIA

The EHS&S compliance audit would be carried out and evaluated against the following criteria:

- Applicable Local and National environment, occupational safety, health and social legislations;
- IFC Performance Standards on Social and Environmental Sustainability (2012);
- Good International Industry Practices (GIIP) including elements of ISO 14001, OHSAS 18001 Occupational Health and Safety Management System; and
- All requirements and mitigating or monitoring measures specified in the Environmental and Social Impact Assessment.

1.3 APPROACH TO THE COMPLIANCE AUDIT

The Audit was broadly divided into four tasks:

- Document review;
- Site visit and consultation with Project Developer and EPC contractor;
- Generic community, and workers consultations during the site visit; and
- Reporting

1.3.1 DOCUMENT REVIEW

EQMS reviewed the provided documentation to evaluate the extent to which the potential EHS&S impacts of the Project have been assessed and management systems developed and the consistency of these assessments with the guidance prescribed in the Applicable Standards. This includes the following key documents:

- CMC Annual Training Calendar & Training Records
- Work Permit System For Non-Routine Job
- Environment, Health, Safety & Social Policy display evidence of CMC
- Environmental Action Plan of Construction Phase
- Sample dated document of Sub-contractors labour engagement

- NDE_ Labor list, labor engagement location and location wise labor number of last week of May 2018
- Project specific HR policy
- CMC Site Specific Health & Safety Manual
- NDE Equipment Inspection Checklist For May 2018
- NDE_NEPC_Incident Log Sheet For April & May 2018
- Hazard Identification & Risk Assessment (HIRA)
- NDE_Safety Training Module
- Hazardous Materials Management (HMM) plans
- HSD spill control management and access control plan
- Activities on associated health hazards & mitigation measures to the
- local community
- Report on CSR activity with the list of Beneficiaries from the event
- Traffic Management evidence at job site
- And others (including few observations of NWPGCL)

Gaps in the existing documentation required to be in line with the Applicable Standards were identified and analyzed. This included reviewing gaps in the:

- Identification of Project impacts;
- Assessment of impacts;
- Development of management and mitigation measures; and
- Development of management systems for implementation and monitoring.

Identification and assessment of potential Project impacts should be based on an understanding of the proposed components, methods and activities of the Project and on an understanding of the environmental and social context of the Project area. As such, EQMS reviewed the description of the Project contained in the documentation and also the assessment of baseline social and environmental conditions in the Project area. (The site visit later provided an opportunity to identify any further environmental or social receptors and sensitivities, understand the context of the site, current status of the project activities, implementation of the management plans and mitigation measures and discussion with Project representatives etc.).

EQMS also evaluated the methodology for the assessment of impacts (but did not redo any impact assessment work). The IFC standards require the assessment of potential impacts EQMS also reviewed the management and mitigation measures proposed in the Draft ESIA and other supporting documentation. The appropriateness of these measures were evaluated with respect to the extent to which all documented and agreed mitigation measures are in line with the requirements of components of the Applicable Standards. Any further impacts not included in the documentation were also identified.

Where residual impacts after mitigation have been assessed in the ESIA, the adequacy of the proposed mitigation measures were evaluated against their ability to ensure residual impacts are contained within acceptable levels (i.e. compliance with the Applicable Standards).

EQMS also reviewed available management plans and evaluated the extent to which they are consistent with international good practice. EQMS evaluated the management plans against the IFC standards to identify gaps and deficiencies.

1.3.2 SITE VISIT

EQMS conducted the site visit and consultations on 21-22 July 2018. The site visit served following purposes:

- Allowed the inspection of the current status of the Project and its associated components;
- Enabled EQMS to observe implementation of the mitigation measures and management plans pertaining to environment, health, safety and social aspects as delineated in the ESIA and HSE management system;
- Enabled EQMS to observe the Project site, jetty area and surrounding areas;
- Enabled EQMS to identify environmentally and socio-economically sensitive receptors present in the surroundings of the Project area; and
- Enabled EQMS to conduct some succinct and focused review with the workers and other local stakeholders on social aspects.

The material Gap between ESIA, ESMS, HSE management system and its implementation with respect to the requirements of the Applicable Standards are identified and described in this report. Recommendations on measures to address these gaps and assist the Project in aligning with the Applicable Standards are also provided in ***Section 4***.

Table 1-1: Site Assessment and Consultations

Date	Summary of Activities
	• Opening meeting with the Project Team of EPC Contractor; • Presentation by the EPC Contractor on current project status and implementation of the HSE systems; • Visit to the Construction Area of the Project with HSE team of the EPC Contractor; • Visit to Plant area with HSE team of EPC contractor; Review of HSE management documentation; • Discussion with the CMC Site Head to brief about key observations
	• Discussion with NWPGCL Project Team;

	• Discussion with subcontractors and workers; • Visit to worker's accommodation area; • Review of HSE and social management documentation; • Closing meeting with the EPC contractor in presence of NWPGCL people.
	• Closing meeting with Project Management Team of NWPGCL in Dhaka office.

1.4 LIMITATIONS

While this assessment has endeavored to provide a comprehensive review against the requirements of the Applicable Standards, however, there remain certain limitations to the assessment that should be considered:

- This report is based on the site visit and review of information made available to EQMS. Note that the findings in this report are subject to change depending upon other information that may come up in future.
- We cannot guarantee that these activities will necessarily yield complete information;
- The independent review focused on the Sirajganj 225 MW Combined Cycle Power Plant Project (Dual Fuel -3rd Unit);
- The independent review is a high-level assessment of environmental and social risks/issues and should not be construct as a detailed legal compliance review to the conditions stipulated by enforcement agencies in the regulatory approvals and limited to the environmental and social approvals already accorded to the Project and shared with EQMS;
- The documents and records that were made available in Chinese language only and could not be reviewed, however, EQMS tried to understand the content of various forms and formats made available during the documentation review at the site with the help of interpreters.

1.5 USES OF THE REPORT

EQMS is not engaged in consulting or reporting for the purpose of advertising, sales promotion, or endorsement of any client interests, including raising investment capital, recommending investment decisions, or other publicity purposes. Client acknowledges that this report has been prepared for their exclusive use and agrees that EQMS reports or correspondence will not be used or reproduced in full or in part for such purposes, and may not be used or relied upon in any prospectus or offering circular. Client also agrees that none of its advertising, sales promotion, or other publicity matter containing information obtained from this assessment and report will mention or imply the name of EQMS.

1.6 LAYOUT OF THE REPORT

The draft report is structured as under:

Section 1: *Introduction and Background (this section);*

Section 2: *Brief Project Description and Context Setting;*

Section 3: *Gap assessment to the Applicable Reference Framework;*

Section 4: *Corrective Environmental and Social Action Plan*

Section 5: *Conclusion*

ANNEX 1: *Photo Documentation*

ANNEX 2: *Check list of worker accommodation*

ANNEX 3: *Drinking water sample Test result*

1.7 CURRENT PROJECT STATUS

The Project is presently in the construction phase. Chronology of key mile stones achieved till date is as follows:

1. Engineering progress:
   Total number of engineering drawings & documents: 323
   Total number of engineering drawings & documents submitted to Owner's Engineer: 323
   Total number of engineering drawings & documents approved by Owner's Engineer: 296
2. Procurement Progress (%):
   Around 99% procurement have been completed.
3. Construction Progress(%):
   More than 78% construction have been completed.

Further to this current status of various construction activities as reported by the EPC contractor is as follows:

Status of Equipment Procurement

Key Items	Weightage factor* (A)	% Progress (B)	% Actual progress (A x B)
GTG Package including Ancillaries	33.00%	100%	33.00%
STG Package including Ancillaries	9.00%	100%	9.00%
HRSG Package including Ancillaries	9.00%	96%	8.64%
Bypass Stack	4.80%	100%	4.80%
Main Building Steel Structure	3.00%	100%	3.00%
Overhead Cranes	1.20%	100%	1.20%
Gas Station and Gas Booster	8.00%	100%	8.00%
RMS	7.00%	90%	6.30%
Raw Water Treatment Station	1.50%	100%	1.50%
Water Treatment Plant	1.50%	100%	1.50%
Water Tanks Material and Ancillaries	1.00%	100%	1.00%
Cooling Tower	2.50%	100%	2.50%
C.W. Pump	1.50%	100%	1.50%
Other Pumps	0.80%	100%	0.80%
Dosing Equipment	0.40%	100%	0.40%

Air Compressor	0.50%	100%	0.50%
Deep Well Pumps	0.30%	100%	0.30%
Fuel Oil Pumps	1.50%	100%	1.50%
STG Package including Ancillaries	13.09%	60%	7.85%
Main Building	5.45%	93%	5.07%
Overhead Cranes	1.09%	100%	1.09%
HRSG Package including Ancillaries	13.09%	90%	11.78%
Bypass Stack	5.45%	100%	5.45%
Gas Station and Gas Booster	5.45%	90%	4.91%
RMS	5.45%	65%	3.55%
Raw Water Treatment Station	0.91%	100%	0.91%
Water Treatment Plant	0.91%	90%	0.82%
Water Storage Tanks	1.36%	95%	1.30%
Cooling Tower	2.27%	96%	2.18%
C.W. Pump House	1.36%	85%	1.16%
Combined Pump Room & Raw Water Dosing Room	0.64%	90%	0.57%
C.W. Dosing Room	0.64%	90%	0.57%
Air Compressor System	0.45%	100%	0.45%
Extension of Administration Building	0.41%	53%	0.22%
Deep Wells (2 No.)	0.27%	80%	0.22%
Fuel Oil Pump Area	0.91%	85%	0.77%
Fuel Oil Tanks	2.27%	90%	2.05%
Diesel Generator	0.45%	40%	0.18%
Oily Waste Water Treatment System	0.45%	25%	0.11%
Emergency Oil Pit	0.45%	40%	0.18%
Transformer	2.73%	100%	2.73%
GCB	0.91%	55%	0.50%
230kV Switchgear (Including Outside Substation)	2.73%	100%	2.73%
Central Control Building	2.55%	85%	2.16%
CEMS Room	0.18%	30%	0.05%

Plant Cable	0.55%	70%	0.38%
Plant Underground Pipelines	0.55%	90%	0.49%

Construction Progress

Key Items	Weightage factor* (A)	% Progress (B)	% Actual progress (A x B)
GTG Package including Ancillaries	16.36%	98%	16.04%
Key Items	Weightage factor*	% Progress	% Actual progress
	(A)	(B)	(A x B)
Plant Pipe Racks	0.27%	50%	0.14%
Plant Drainage Water Pipeline	0.41%	70%	0.29%
Plant Wall and Fencing Construction	0.27%	5%	0.01%
Plant Road Construction	0.27%	3%	0.01%
Plant Plantation	0.27%	3%	0.01%
Systems Commissioning	1.82%	25%	0.45%
GTG Commissioning	2.73%	30%	0.82%
Performance Test of Simple Cycle	0.45%		0.00%
Reliability Run of Simple Cycle	0.91%		0.00%
Combined Cycle System Commissioning	1.82%		0.00%
Performance Test of Combined Cycle	0.45%		0.00%
Reliability Run of Combined Cycle	0.91%		0.00%
Total Construction Progress (%)			78.21%

GAP ASSESSMENT TO THE APPLICABLE REFERENCE FRAMEWORK

1.8 APPLICABLE STANDARD

This section reviews the EHS&S performance of the Project with respect to the Applicable Standards, as defined in Review of ESHIA Report Annex 1. In terms of IFC PS standard EQMS review the following 4 PS standards:

- PS1: Assessment and Management of Environmental and Social Risks and Impacts;
- PS2: Labor and Working Conditions;
- PS3: Resource Efficiency and Pollution Prevention;
- PS4: Community Health, Safety and Security.

As per ESHIA document, PS 1 is triggered as NWPGCL has two-tier operations both at the Corporate (Head) and Project.

PS 2 is triggered since the NWPGCL, as government agency is committed to oblige the Bangladesh Labor Law, 2006 as applicable for the labors both at the construction and operation phases.

PS 3 is triggered as the third unit has the potential sources of pollution at its construction and operation phases if mitigation measures are not implemented properly.

The PS 4 applicability is triggered as the current project may pose impact to community health, safety and security during construction and operation phases

The proposed site is owned by BPDB, and has been leased to NWPGCL through Land Lease Agreement (LLA). As the site is vacant, no physical or economic resettlement is required, and therefore, PS5 Land Acquisition and Involuntary Resettlement do not apply.

The PS 6 is not triggered as the NWPGCL's own jetty will not be used and thus the dredging activities will not be required. The NWPGCL has decided to use the Jetty of the BBA.

PS 7 is not triggered as the project area is located in rural to semi urban setting and settlements around the project site do not have any indigenous populace..

The PS 8 is not triggered as the project site does not cause an impact or effect on identified sites of cultural and archaeological significance.

In addition, the WBG EHS General Guidelines and Guidelines for Thermal Power Plants apply to this Project.

The findings are categorized as per the following definitions:

Table 1: IFC PS Alignment Definitions

Rating	Definition
Aligned	Information available indicates that the Project fulfills the requirement and/or is aligned with intended outcome of the requirement.
Partially Aligned	Information available indicates that the Project partially fulfils the requirement and/or is partially aligned with intended outcome of the requirement.
Not Aligned	Information available indicates that the Project does not fulfil the requirement.
Insufficient Information for the assessment	There is insufficient information to make an assessment of the level of alignment.
Not Applicable	The requirements do not apply to the Project at the current time.

The gap assessment with respect to applicable standards primarily focuses on the construction phase environmental and social management and monitoring plan (ESMP) developed as part of the ESIA study, Project level environmental, health, safety and social policies, procedures and plans as being developed by NWPGCL and the EPC contractor as well as their implementation on ground. Furthermore, the aspects related to the operation phase of the Project and linked management plans have been referred in order the operation phase.

Table 1-2: Gap Assessment to the IFC Performance Standards (2012) of the Project

S. No	Requirements	Previous Observation/Gap	Level of Compliance (2nd Audit)	Recommendation
IFC PS 1: Assessment and Management of Environmental and Social Risks and Impacts .This section provides a high-level assessment of the adequacy of environmental and social management systems that have been put in place by North West Power Generation Company Limited (NWPGCL), and reviews any gaps/ conformance aspects to its implementation with respect to the Project and its associated facilities/components. The company is an Enterprise of Power Development Board under the Ministry of Energy and Power, People Republic of Bangladesh. As a government enterprise entity, NWPGCL has diversified footprint in energy & power sector here in Bangladesh.				
1.1	Policy: The client will establish and maintain an Environmental and Social Management System (ESMS) appropriate to the nature and scale of the project and commensurate with the level of social and environmental risks and impacts. The ESMS will incorporate the following elements: • Social and Environmental Assessment (SEA or EIA); • Management program; • Organizational capacity; • Training;	NWPGCL has a formal Environment, Health, Safety and Security (ESMS) Plan and Manual, which defines the scope for EHSS during the construction and operation phases of the Project. The proponent segregated the procedures under the title of corporate control procedure (CCP) and project level procedures. Corporate Control Procedures (CCP) has	Aligned	

	• Community engagement; • Monitoring; • Reporting.	been developed to define resources, responsibilities and authority for effective management of environmental and social risks and impacts at the project inception stage and establish communication system for decision making and to evaluate the project performance at the corporate level. These procedures are directly controlled by the corporate office of NWPGCL and are mandatory for implementation. The Project Level Procedures, detailed in the present section, would provide guidance for management of environment and social issues associated with the project level at the construction and operation phase in line		

		with Good International Industry Practices (GP), IFC Sustainability Framework, 2012 and applicable national regulatory requirements. Broadly the ESMS covers the following components under the following to broader header : Corporate Control Procedures (CCP) • Environment and Social Risk Assessment • Contractor Identification and Management Procedure • Construction Management • Chance Find Procedure • Training and Competency Needs of Employees		

		• Internal and External Audits for projects (construction and operation phase) • Reporting • Management Review The each sub-clause also poses more sub-heading as required and relevant for the project implementation and evaluation. Project Level Procedures (PLP) • Construction Environment Health and Safety (EHS) Management • Risk Assessment • Emergency Preparedness and Response • Occupational and Community Health and Safety		

		Management • Stakeholder Engagement Procedure • Grievance Redressal Mechanism • Addendum to NWPGCL's Human Resource Manual The each sub-clause also carries more sub-heading as required and relevant for the project implementation and evaluation. The ESMS Manual Scope further defines that during the construction/ operation phase of the Project, the Contractor shall prepare, implement and enforce a Contract-specific health, safety and security program in the EHSS Plan and Manual to ensure compliance with Site		

		requirements, Applicable Laws, ordinances, standards, directives, rules, regulations and other lawful orders governing Work on Site and on in-Country work areas. It further specifies that the NWPGCL DM/AM shall ensure for reviewing and proposing any changes to the EHSS Plan and manual. Subsequent to the EHSS Plan and Manual being placed into effect, the DM/AM is responsible for oversight of its execution by the contractor.		
1.2	Policy: The client will establish an overarching policy defining the environmental and social objectives and principles that guide the project to achieve sound environmental and social performance. The client will communicate the policy to all levels of its organization	NWPGCL is having an Environment, Health & Safety and Social Policy which is generically applied for its all projects. This policy had been adopted by NWPGCL from 1st October 2014. The policy defines the environment,	Aligned	During the site visit it was found EHS Policy of EPC contractor were displayed at sensitive areas. (as suggested).

		health and safety objectives of the company, which are focused towards commitment to the principle of sustainable development and continuous improvement on health and safety performance with a goal of zero incidents.		
1.3	Identification of Risks and Impacts: The client will conduct a process of Social and Environmental Assessment that will consider in an integrated manner the potential social and environmental (including labour, health, and safety) risks and impacts of the project. The ESA should cover the project area of influence across the project lifecycle	In order to identify and mitigate the environmental and social impacts associated with the proposed project, following actions have been taken: • NWPGCL has has obtained site clearance from DoE with proper due diligence. • The environmental and social impact assessments provided in the	Aligned	

		EIA report were reviewed against the Applicable Standards as part of the compliance audit. It was observed that the EIA study has broadly captured majority of the, Environmental, EHS and Social impacts associated with the Project as well as associated components (based on available information) during the construction, operation and decommissioning phases of the Project. Key impacts identified due to the Project are: • Impact on air		

		quality • Impact due to Noise • Impact on surface water quality • Traffic induced impacts • Impact on biodiversity • Impact on soil quality • Impact due to waste generation Furthermore, impacts due to off-site infrastructure (i.e. gas pipeline, transmission line and sand mining) were also assessed in limited scope as part of the EIA study based on the available information of these components. Meanwhile, the 3rd Unit has very low impact on offsite excavation of pipeline and transmission line as the		

		requirement will be fulfilled from the 1 Unit which was earlier completed. Only excavation required on sit of the project area.. However, no assessment of impacts of approach road construction has been addressed in the EIA report. It was further been noted during the site assessment that the approach road has been constructed by considering the high flood level of the Jamuna River. The EIA has also provided the impact of flooding and climate change, based on the historical data of water level and meteorology on the Project. Quantitative impact assessments have been provided for air quality, noise, greenhouse gases in the EIA report. Environmental and		

		Social Management System (ESMS) of NWPGCL has provided an Environmental and Social Management and Monitoring Plan for the Project, covering pre-construction, construction, operation and decommissioning phases of the Project. It further assigns broader level roles and responsibilities of NWPGCL/ EPC Contractor for implementation and monitoring of the mitigation measures. NWPGCL corporate management office also included under this plan.		
1.4	Establish Legal requirements for both social and environmental parameters Applicable laws and regulations of the jurisdictions in which the project operates that pertain to social and environmental matters, including	The EIA and ESIA Report have been provided a detailed policy, legal and administrative framework for the Project, to address the	Aligned	Legal requirements and update given separately in Table 1-4

	those laws implementing host country obligations under international law, will also be taken into account.	requirements of local and national statutory requirements, national policies, and international legal obligations (treaties signed/ratified by Bangladesh) as well as the Equator Principles and the IFC Performance Standards, General EHS guidelines and sector specific guidelines for thermal power plants provided by IFC. The proponent and EPC contractor also maintain a legal register in order to check compliance with respect to applicable laws and regulations. However, there are few scopes of revamp this area. During the site visit and discussion with the EPC contractor, some non-compliances in respect to legal requirements were noted, which have been		

		provided separately in Table 1-4		
1.5	<u>Management Programs</u> Management of a programmed (with defined desired outcomes as measurable events) to mitigate and implement improvement measures and actions that address identified social and environmental risks and impacts	The ESMS document has provided an Environmental and Social Management and Monitoring Plan for the Project. It further assigns broader level roles and responsibilities of NWPGCL/ EPC Contractor for implementation and monitoring of the mitigation measures. The CEGIS reference for ESMS study mentions development of specific plans for construction and operation phases of the Project, which include: • Operations and Compliances • Occupational and Community Health and Safety Management Plan	Aligned	The social and environmental management program was improved. Adequate Initiative had been taken from proponent and EPC end. Generation of monthly monitoring report, meeting with EPC and its sub-contractors, monitoring of implementation of action plan etc were found during document review. Most of suggested plan as per ESIA also found available. The proponent also shared a document where a day long training has been conducted by awarded consultant highlighting the following features- (image attached • About Environmental, Health and Safety • Stakeholder Engagement and GRM • About Contractor Selection Procedure • contractor identification and management procedures The document also refers the participation 23 personnel's comprising of NWPGCL corporate and project

		• Contractor Management Plan • Contract Labor and Labor Camp management plan • Emergency Preparedness and Response Plan Pollution Prevention Plan • Hazardous Materials Management Plan • Resettlement Action Plan • Community Development Plan • Stakeholder Engagement Plan Information Disclosure, • Consultation, and Participation ; and • Community		office, CMC, NEPC and NDE officials.

		Grievance Redress Plan It further states that the ESMS of the project will have provisions of routine monitoring, training schedules for operational staff, monitoring schedule, implementation schedule as well as follow-up of recommendations of monitoring/ inspection. It has been noted that an EHS Plan has already been developed by the EPC contractor and being rolled out for the construction phase of the Project. This also includes an emergency response plan for the on-site emergencies.		
1.6	Define organizational structure with well-defined roles, responsibilities and authorities	The proponent has standard organization structure with defined roles and responsibilities.	Aligned	Origination structure with define roles and responsibilities were found during the audit trail.

1.7	Training to employees and contractors with direct responsibilities for activities related to the projects social and environmental performance	The EPC contractor has training evidence in line of their annual commitment. .	Aligned	Refers to annul training calendar of CMC 2018, good numbers of training including emergency response, health and safety, PPE, First Aid, Environmental Awareness and Safe Use of Machinery Training evidence were found during the audit trail .
1.8	Emergency Preparedness and Response: Where the project involves specifically identified physical elements, aspects and facilities that are likely to generate impacts, the ESMS will establish and maintain an emergency preparedness and response system. The emergency preparedness and response activities will be periodically reviewed and revised, as necessary, to reflect changing conditions.	The ESIA suggested the following measures need to be addressed by the NWPGCL in order to address the requirement of emergency response system: • Appoint a suitably qualified Emergency Coordinator(s). • Develop a site specific Emergency Response Plan (ERP), covering all	Aligned	NWPGCL is adopted ERP for the Project. They have also reviewed ERP document and conduct some extend of community exchange session (offsite) with the stockholders. They also conduct on site drill with the participants of EPC, and its sub-contractors.

		foreseeable emergencies. • The ERP should include: ○ what should be done and who should do it; ○ what equipment is required and where this will be located; ○ staff training requirements and inductions for new		

		workers and site visitors; ○ a method for communication of the ERP to all workers and people arriving on-site; ○ an emergency contacts document which is maintained up to date;		

1.9	Monitoring and Review: Establish procedures for monitoring and measurement of the effectiveness of the management programme.	The EIA report has provided an environmental and social monitoring plan for the Project during different phases of the Project with institution level roles and responsibilities and frequency of monitoring. The organization structure of NWPGCL is currently is available. The roles and responsibilities should be further defined within the company.	Partially Aligned	NWPGCL has been ensured implementation of the environmental management and monitoring plans with development of in-house environmental monitoring systems with trained personnel. However, more integration and engagement required to monitor EPC contractor activities. Especially contractor management and required due diligence .
1.10	Provision for internal reporting as well as external reporting on action plans. Where appropriate, client will consider involving representatives from Affected Communities to participate in monitoring activities.	It has been noted that periodic internal and external reporting of environmental management and monitoring is required in the EIA report.	Aligned	NWPGCL has set up a system of regular review of EHS performance of the EPC contractor and report in this connection are also found in local language/ English.
1.11	Stakeholder Engagement: The client will develop and implement a Stakeholder Engagement Plan that is	The ESIA states that Stakeholder Consultations were undertaken to ensure	Aligned	NWPGCL and the EPC contractor should develop a Commitment Register as a part of their stakeholder engagement process in order to

	scaled to the project risks and impacts and development stage, and be tailored to the characteristics and interests of the Affected Communities. The client will provide Affected Communities with access to relevant information on: "the purpose, nature, and scale of the project; the duration of proposed project activities"	accurate and timely information regarding the Proposed Development was shared with stakeholders including the Affected Communities and other interested parties. The consultation sessions included Focused Group Discussions (FGD). One FGD was organized only with villagers adjacent to the project site and another with community leaders around the project site. Formal and informal meetings in project area for FGD with different groups and interviews with Key Informants (KIs) of the area were held with the primary objective to understand the people's perceptions regarding relevant issues. Discussion mainly centered on problems of the area		document the outcomes of public consultations and respond to local community expectations, and ensure that these are communicated back to stakeholders and updates provided. Such register was not available for review during audit trail.

		relevant to the proposed project and suggested solutions. Apart from Focus Group Discussion, In-depth interviews were conducted with the different officials of Sirajganj Sadar upazila to grasp their views and opinions. The study also took into consideration the findings of questionnaire survey carried out as part of the EIAs conducted for other power plants, (positive and negative impacts), the socio-economic and political situation and peoples' perception about the project. Consultation was undertaken at early stages of the EIA study so that potentially affected groups/people could provide meaningful input to the EIA. The dialogue, both		

		formal and informal, was continued throughout the period. All consultations and meetings were documented including responses to the questionnaire. The basis objective of the consultation was to apprise the local inhabitants about the proposed project and to seek their opinions regarding the possible impacts of the project. The ESMS report indicates to NWPGCL has to meet IFC criteria 1 and 5 (as appropriate) along with the Stakeholder Engagement Procedure (SEP) shall have the following elements: i) Stakeholder Identification and Analysis ii) Communicative		

		Methods iii) Disclosure of Information iv) Stakeholder Engagement Program v) Negotiation and Partnership vi) Grievance Management vii) Monitoring and Reporting During the site visit the adequate documentation of SEP has not been found, development scope still ahead which need to develop and set up		
1.12	External Communications Clients will implement and maintain a procedure for external communications that includes methods to: (i) receive and register external communications from the public; (ii) screen and assess the issues	NWPGCL has an assign body for grievance mechanism which is headed by Project director (unit 3). The body active participation or footprint in project need to revamp and clearly articulate to the	Aligned	NWPGCL has established and escalate grievance mechanism from top to bottom including EPC contractor and sub-contractor. A register was available for review and interesting no issue was claimed. As per concern officials, no grievance was found in the dedicated box or telephonic mechanism.

	raised and determine how to address them; (iii) provide, track, and document responses, if any; and, (iv) adjust the management program, as appropriate.	other stakeholder of this project. EPC contractor of the proponent also need to understand and implement the process if any issue raises. During the field visit, it was found that EPC contractor is not well aware about the grievance mechanism and relevant stockholder communication process. Disclosure process as mentioned in the ESMS needs to follow. Information need to categorized i.e. general, detailed, electronic and communication as mentioned in ESMS.		However, mechanism of grievance awareness and cascade need to improve especially for the construction labor as many were not aware about that properly.
PS 2 Labor and Working Conditions NWPGCL presently has limited employees at site. NWPGCL has appointed CMC as the EPC contractor for the construction stage. CMC gave sub-contractor to NEPC and NDE as subcontractor. NDE and NEPC directly employed locals and subcontractors hired contractual workers. The present assessment therefore has limited itself to the construction stage; the operations stage related findings will be covered during subsequent assessments. Nonetheless, potential issues for operations stage are being highlighted wherever required.				
2.1	<u>Human Resources Policies and Procedures:</u>	Being a part of government company,	Aligned	NWPGCL has service rules which align to Bangladesh government service

	A Human Resources policy which sets out its approach to manage employees consistent with the requirement of this PS.	NWPGCL follow the services rules. It covers HR Policy of NWPGCL. The review suggests that the following aspects are presently covered in the HR manual: • Job description; • Code of conduct; • Manpower planning; • Employee grading policy and structure; • Gratuity policy and other benefits; • Compensation and benefits like PF and Gratuity; • Promotion policy; • Bonus and other benefits; • Service code of conduct; • Accidental insurance/ compensation		policy.

		policy; • Leave Policy; • Probation policy; • Clearly articulated Grievance Redressal Policy and mechanism for the employees; • Training and Development; • Work place environment; • Non-disclosure, data and information handling etc.;		
2.2	The client will document and communicate to all employees and workers directly contracted, their working conditions and terms of employment, including entitlement to wages and benefits, hours of work, overtime arrangements and compensation etc.) where such	**NWPGCL** Joining letter for NWPGCL staffs positioned at site were reviewed. The joining letter clearly mentioned the roles and responsibility leave policy, probation, salary	Aligned	The basic wage of the third party workers in the camp is depends on their skills (Unskilled Tk.450/- per day, Skilled Tk.650/- - 800/- per day and Highly Skilled Tk.1,000/- per day). The legal minimum wages in Bangladesh vary depending on sector and the minimum monthly wage for unskilled workers in the Construction and Wood

	agreements are respected. At the minimum comply with the national law	and other details. **NEPC** NEPC own staffs and workers are governed by the NEPC HR policy and conditions for staffs working on international assignments. However, the same was not available for review. **NEPC locally contracted Staffs** The joining letters issued to the limited local contracted staffs could not be made available for review. **NEPC/NDE locally contracted workers** NEPC locally contracted workers are presently staffed in the construction labour camp especially constructed for the local workers (adjacent area people). • Consultations		sector, as established in 2012, is Tk. 9,882. Based on a daily rate for an unskilled worker of Tk. 450/day (see above) and assuming a 24-day work month, this would equate to Tk. 10,800 per month. In order to confirm the initial conclusions (based on a small sample size dated 28-05-2018– wages of two workers of NDE, Mr Hasan daily wages was 460 where Mr Sufal awarded 340 BDT) that the wage structures for construction of the project are merely compliant with national legislative requirements. (doc sample attached annex 3 - Sample Daily Labour Bill). However, There is no insurance supporting documents for the workers, either by the EPC Contractor or the subcontractors were available for review.

		with these workers suggested that they were sourced by NDE with support of local contractor involvement. • It was also reported that they were not from local areas and travelled as far as app. 200-500 km. (i.e. bhola district) • It was also informed that there was no contract agreement or any document specifying the conditions of employment, wages, benefits, hours of work, or overtime arrangements between labor and EPC		

		contractor. **NEPC /NDE hired subcontractor workers** Bothe sub-contractors signs a subcontractor agreement both for undertaking work at the site and supply of labor for CMC. The contract agreement reluctant to provide by the sub-contractors. As a result details fail to reveal by the EQMS auditors. After couple of chasing CMC provide only cover and back page of the agreement which was literally useless to further scrutinize ahead. Discussions with		

		the workers suggested that no such document explaining and condition of employment are provided to the workers. Only the details pertaining to the attendance and payment are maintained by the subcontractors. • The scope of overtime reported to pertain but its standard fail to narrow down as the EPC contractor CMC reluctant to provide actual contract document between his sub-contractors. According to section 102 of the		

		Bangladesh Labour Law (2005), the employer is required to pay the worker, overtime, double the rate of her/his usual wages. i.e. basic & dearness allowance, if any. • Leaves are provided one day per week. However almost all the workers consulted, reported working 7 days a week. The EPC contractor and sub-contractors mentioned that though there is provision for the same , worker's don't avail to deducting in		

		wages; • There is no insurance provided for the workers, either by the EPC Contractor or the subcontractors. Discussions with the subcontractors suggest that there is no insurance coverage being provided to the workers.		
2.3	The client will identify migrant workers and ensure that they are engaged on substantially equivalent terms and conditions to non-migrant workers carrying out similar work	**NDE subcontractor managed migrant workers** It is understood that the approximately 150 workers hired by the subcontractors qualify as migrants. • It was reported that there was no discrimination followed.	Partially aligned	NDE need to improve the conditions of the migrant workers- better accommodation and clearly articulated terms and conditions of employment .

		• These workers were brought in to fill the gap of skill set availability in the local area. The subcontractors have arranged for their accommodation in the nearby areas with shed accommodation facilities. • However, the accommodation facilities could not found standard arrangement as per IFC. The accommodation conditions will need to be improved as standard of IFC and local labour law. **NDE directly managed**		

		migrant workers It was reported that as the construction activity is progressing, specialized skill sets are required (skilled workers like electricians etc.), which are not available locally and hence these migrant workers (from other parts of Bangladesh) were directly hired by NDE • The terms and conditions are not documented and hence it cannot be commented upon; • Informal discussions suggested that the wages are higher than the local workers, primarily due to specialized skill set • Compared to the		

		facilities provided to the Chinese workers (at the site), the facilities provided to the Bangladesh workers are not adequate. • Bangladesh has not ratified any of the four conventions on employment of migrant workers and hence, there is no specific national regulatory safeguard that governs their welfare.		
2.4	Where accommodation services are provided to workers covered by the scope of this Performance Standard, the client will put in place and implement policies on the quality and management of the accommodation and	**NWPGCL Accommodation** Presently limited NWPGCL employees are housed at the accommodation facilities provided at the site. It	Partially aligned	The EPC contractor and subcontractors of unit 2 and 3 are same and combine working at project site. Accommodation facilities are same site where unit 3 has been given. The status of labor camp chronologically developed since the inception of unit 2

	provision of basic services. This also includes the applicable requirements of the IFC Guidelines on Worker Accommodation.	serves as the office space, canteen as well as the accommodation space. (Most employee of unit 1has been appointed for unit 3 as a shared employee). The facilities provided are almost similar to the NEPC staffs and workers accommodation camp as discussed below. **NEPC Chinese Employee and workers-Accommodation** The NEPC employees (Chinese) and workers (Chinese) are housed in separate accommodation camp inside the project boundary. Some of the facilities at the site include: • Depending upon the worker and the employee grade, 1 to 6 people are accommodated in		work. In this reason, extra mileage has been awarded the EPC contractor in terms of accommodation facilities especially the NDE labour shed. However, few areas like poor bedding facilities still need to develop by the NDE to mark up the IFC standard.

		each of the rooms; • Adequate sanitation facilities are provided for all. The toilets and washrooms are attached with room (behind the residing room); • All the rooms are provided with Air conditioners; • Security facility common for the site is available at all the times; • Owing to the paucity of space, the rooms are not big; the size of the rooms is typically 10 ft by 12 ft. At the workmen level typically bunkers are provided. • Water is provided		

		in the bathroom 24hr on all the days; • Prefabricated structures are used with cemented floors. • Electricity is provided in the rooms. Television is provided in the common space like canteen followed by most of the individual rooms. • Cooking is not conduct inside the rooms; Food is provided in the canteen at scheduled timings. • Observations around the EPC Contractor worker facilities (Chinese staffs and workers)		

		indicated that the provisions appeared adequate with respect to the main tenets of the IFC Guidelines on Worker Accommodation with respect to welfare, sanitation, health care facilities etc. **NDE hired Direct workers' Accommodation** The accommodation facilities provided to the directly hired workers has certain issues which will need immediate correction. • NDE conducted a construction camp situated outside the project area. There are 14 rooms in the camp. Each of the		

		rooms size is 60 sqm. All the rooms have very poor bedding facility covering all sides of the room. • All the workers were not in the rooms during the visit; however it was reported that the accommodation has been designed to accommodate 15-20 people in a room; however the considering room size, more than double people are usually stay in each room; • Electricity is provided in the room, with limited lighting and inadequate		

		ceiling fan to meet the requirements of numerous workers in a single room; • The ventilation was also found to be limited to single /two windows, which was usually kept closed owing to mosquitoes. Reportedly there is no insecticide spray in the rooms or in the lanes of the accommodation camp. Kitchen waste collected by third party ; • The storage of firewood in the lane further exposes the workers to health and safety risk. There was not		

		enough fire extinguisher in the construction camp; • The workers also reported that owing to suffocation inside the room, with limited ventilation, they are forced to keep the doors open or either sleep at the construction site; • Common sanitation and bathroom facilities are provided; • Mosquito nets or repellents are not provided and in cases where the workers have access to them, it is not used because of claustrophobic		

		condition; • There is reported to a place for common canteen but the during field visit it has been found that the said canteen also used for worker living purposes. ; • No recreation facilities are available; there are no women workers housed in the accommodation camp and none of the workers have come with their families. • Fire detector found at the camp but those detector activities not tested. Even the detectors is centrally		

		connected /any control panel		
2.5	Worker's Organization Where law recognizes worker's rights to form and join worker organizations of their choice without interference, and collectively bargain, the client will comply with the national law.	There is no collective bargaining agreement or any worker union at the site presently. As mentioned, presently most of the local workers are contractual workers with many of them working for the first time at the construction site.	Aligned	NGPGCL comply with local law in this context.
2.6	Non-Discrimination and Equal Opportunity Non-discrimination and equal opportunity: Employment decisions will not be made on the basis of personal characteristics unrelated to job requirements. Job opportunities will be provided on the principles of equal opportunity and fair treatment. The principles of non-discrimination apply to migrant workers.	NWPGCL presently does not hire any contractual workers at the site. There are limited direct staffs of NWPGCL at site. All the workers are hired by NDE /NEPC directly or through its subcontractors. As reported by NEPC /NDE and during site visit no discrimination is followed in terms of employment opportunity. The site management reported that in the initial stages,	Aligned	NWPGCL has ensured principles on non-discrimination and equal opportunity are included in the HR Policy Statement and that the EPC Contractor abides by the same while engaging local sub- contractor or contract workers.

		there had been concerns by the locals regarding employment of the outsiders; however in due course of time, the same has subsided.		
2.7	Grievance Mechanism Grievance mechanism for workers where they can raise reasonable workplace concerns.	There is no formal on-site grievance mechanism for workers. • It was reported that there is a suggestion box put at the main gate, in which the workers are expected to put the grievance. • However, looking at the education level of the workers at the site, it is likely that the present system will not work. • There is no disclosure of any kind of grievance redress	Aligned	Refers to 1st audits suggestion, the proponent/EPC should establish channels for management and workers to communicate and for the workers to place their concerns as well as suggestions. The grievance process should be made accessible for construction workforce and should enable workforce to raise anonymous complaints. A record register, which was prepared by EPC contractors, was available for review having zero reporting of grievance. The channel of communication of grievance was mainly found dedicated box or limited notice..

		mechanism (GRM) to the workers, neither the same has been displayed at the site. Presently, the proposed grievance mechanism for the contractors is not available. • Both NWPGCL and EPC contract reported that there are no labour cases or litigations that are presently ongoing in the national labour court.		
2.8	Protecting the Work Force: **<u>Child Labour</u>** The client will not employ children in a manner that is economically exploitative or is	The site management reported that there are no workers below 18 years of age presently employed at the site. It was also reported that	Align	No child labour /forced found during the audit trail.

	likely to be hazardous or to interfere with child's development. All work of persons under the age of 18 will be subject to an appropriate risk assessment and regular monitoring of health, working conditions, and hours of work. **<u>Effective abolition of child labour</u>** The ILO Minimum Age Convention, 1973 (No. 138) and its accompanying Recommendation (No. 146) set the goal of elimination of child labour, and the basic minimum age for employment or work (in developing countries at 14 years of age or the end of compulsory schooling, whichever is higher; and 15 or the end of compulsory schooling for developed countries). The Convention sets a minimum age of 2 years younger respectively; and a higher minimum age for dangerous or hazardous work (basically 18 years of age, but 16	the national ID card is checked for verification which also mentions the age of the workers. There is no other check undertaken for identifying if there are potential cases of child labourers at site. Bangladesh labour law, 2006 stipulates that anybody below 14 years would be classified as child, while the ones falling between 14 to 18 years are classified as adolescent and are not to be engaged in hazardous work. However in course of the site visit, some cases were identified which could be possibly below 14 years of age; however had documents mentioning age of 18 years. It is expected that such potential cases are identified and such cases not to be considered for any hazardous nature of		

	in certain circumstances). **<u>Forced Labour</u>** The client will not employ forced labour, which consists of any work or service not voluntarily performed and that is extracted for an individual under threat of force or penalty. The client will not employ trafficked persons. Elimination of all forms of forced or compulsory labour According the Forced Labour Convention, 1930 (No. 29), the ILO defines forced labour for the purposes of international law " all work or service which is exacted from any person under the menace of any penalty and for which the said person has not offered him voluntarily" The other fundamental ILO instrument, the Abolition of Forced Labour Convention, 1957 (No. 105), specifies that forced labour can never be used for the purpose of economic development or as a means of political education,	work. There were no instances of forced labour observed at site.		

	discrimination, labour discipline, or punishment for having participated in strikes.			
2.9	<u>Occupational Health & Safety</u> The client will take steps to prevent accidents, injury, and disease arising from, associated with, or occurring in the course of work by minimizing, as far as reasonably practicable, the causes of hazards. In a manner consistent with good international industry practice, as reflected in various internationally recognized sources including the World Bank Group Environmental, Health and Safety Guidelines, the client will address areas that include the (i) identification of potential hazards to workers, particularly those that may be life threatening; (ii) provision of preventive and protective measures,	Occupational health and safety of staff and workers are coordinated by the EPC Contractor's EHS department. As per EPC contractor organization structure CMC's EHS department consists of HSE Manager. However manual was prepared in Chinese language and due to that EQMS was not able to review the same. The First Aid Centre has a female Chinese doctor (NEPC) full time paramedical staff within the facility. One patient carrying ambulance (shared from unit 1, unit 2 has no ambulance facilities) is deployed within the facility to address any medical emergency. CMC also has not a tie up with	Partially aligned	Followed by 3rd audit comments, the shared hazard materials control measures was not found available during the audit trail. CMC should carry out inspection for the potential hazards at the facility and provide the risk control as per the hierarchy of control. The scope will also consider its sub-contractor also. Local Bengali doctor also not found during audit trail. It's a long pending issues which successive raised but no correction action was recorded. The issue was related to CMC subcontractors NDE where all the labours were engaged locally. CMC other sub-contractors NEPC also doctor from their native nation. Earlier, a concern raised for her legality in practice in Bangladesh were legal permission of practicing in Bangladesh is not found. It is mentionable NEPC has both the Chinese and Bengali personnel's. It is mentionable, during the audit trail it was also found, NEPC has appointed a

	including modification, substitution, or elimination of hazardous conditions or substances; (iii) training of workers; (iv) documentation and reporting of occupational accidents, diseases, and incidents; and (v) Emergency prevention, preparedness, and response arrangements.	local hospitals which is situated 5 km radius of project area. During our visit to first aid center, EQMS found first aid center is not well equipped in of the establishment facilities and medical facilities. Doctor is not wearing any medical dress; even assistant is not available there. Facility has not prepared formal register to record the Accident/Incident. Only register at first aid center is used to include the general information related to the injured/ill worker. NEPC has developed an injury and illness log and Incident Investigation form (in chinese). As informed NEPC site manager, Investigation is done by the doctor and no proper route cause or corrective		paramedic who was mainly concern for bengali employee including labours. Significant contribution was noted during the audit trail. Injury register also found updated.

		actions are being prepared so far to avoid similar accidents in future. Other aspects performed by NEPC EHS team include (a) safety induction trainings for contractor employees; (b) Weekly site safety inspections; (c) Monday tool box talks (TBT); (d) Fire drills. Documents pertaining to the EHS activities at the site were not available for EQMS review. As informed by the site management, fire drill conduct by them . ESMS also identify Occupational Health and Safety related action items for construction stage. Actions items are followed: • Notify local clinics / hospitals before commencement of construction		

		works; • Job specific medicals for all employees. EHS training and safety induction for all employees and 6 monthly updates. • First aid kits and trained first aid practitioners on-site at all times. Access restrictions (barriers and signage) will be used to prevent unauthorized access to the Project Site. • Preparation of an EHS Plan for approval by NWPGCL , including: o EHS Policy and		

		Objectives; o Appointment of qualified EHS specialist(s) who will be onsite throughout the construction project; o Project EHS rules; o Details of how rules and updates (if required) will be communicated to workers Identification and risk assessment of hazardous activities and high risk areas; o Safe working		

		methods for hazardous activities, including confined space working and working at heights; o Ensure all personnel are provided with all required PPE for the environment they are in and the tasks they are performing; o Implementation of a Lock-out Tag-out program; and Reporting and investigation procedure for all severe		

		and minor accidents, and near misses. o Ensuring all subcontractors (if any) sign and agree to the site EHS Plan. o Provide training for all subcontractors to ensure site procedures are fully understood and complied with. **Identification of potential hazards** The process of task specific hazard identification and recommendation to the		

		identified hazard has not been prepared for construction activities and task specific job safety analysis/risk assessment were also not performed by the facility. EPC contractor does not conducts safety committee meetings at regular interval where respective department head share their EHS observation and complete the non - compliance within the time frame decided by the committee. **Provision of preventive and protective measures** Implementation of the control measures against the specific activities was observed to be not implemented at the site. i.e confined space, Hot work, Electric work etc.		

		Usage of PPEs During site assessment it was observed that construction workers, some cases supervisors were not equipped with mandatory and job specific PPEs at the site. In general, workers were provided safety helmets. During site walkthrough, it was observed that safety shoes were not provided to most of the workers. Workers were also requesting EQMS during visit to arrange for safety shoe. They showed willingness to wear safety shoe. Most of the workers either wearing rubber shoe or sport shoes which are not fit for the construction activities. EQMS also asked the agreement document CMC-NEPC-its sub-contractors agreement for further review but		

		they failed to provide any agreement document to us. **Training of workers** CMC imparts induction training for a new joinees working within the premises. As informed by the site management, Induction training module is for 15 minutes and it covers the basic site safety. CMC sub-contractor i.e NEPC/NDE conducts the Induction training in local language. o Sub-contractors has not conducted any Job specific training related to construction activity such as work height, confined space, electrical safety, Scaffold safety, trainings on IMS		

		procedure. o Sub-contractors has also not imparted the Emergency trainings related to first aid, fire-fighting. Sub-contractors does not maintain the records for the training imparted at the site. o Sub-contractors is also not imparting training required under EIA **Documentation and reporting of Accident & Incident** NEPC has developed an Incident investigation report format. NEPC has not developed any reporting format to report near miss. Some sample		

		accident investigation reports were reviewed and exhibited that the root causes are not being identified in details. First Aid center is responsible to carry out accident investigation involving root cause analysis on its own with limited understanding on the safety front. As reported, there is not mechanism to report near miss. Incidents involving cut injury have been reported in last few months. Corrective action plans were not prepared for any of the accidents and learning lessons were also not prepared and shared with the employees. **Emergency Response Procedures** CMC has not prepared the construction specific Emergency response		

		plan. CMC local management shared they have overall Emergency Preparation and Response measures and it covers emergency response team with Responsibilities. ERP plan has included emergencies such as fire, electrical shock, personal injury, food poising, Large mechanical accident, Drowning accident, radiation accident, other environmental pollution accident. But the mentioned document was not available on the site for further review.		
2.10	Workers Engaged by Third Parties: The client will establish policies and procedures for managing and monitoring the performance of such third party employers in relation to the requirements of PS2. In addition, the client will	During the site visit, document reviewed by EQMS where found sub-contractors NDE has engaged appx (both unit 2 and 3) labors, a total workers comprising skilled or non skilled standard. Sub-contractor	Aligned	NWPGCL put in place a formal contractor management system followed by ESMS implementation.

	use commercially reasonable efforts to incorporate these requirements in contractual agreements with such third party employers.	NEPC document which submitted later to us through over the mail, was made Chinese language However, as discussed the concern of the EPC contractor and its sub-contractor • The contract agreement does not presently mention the requirements of insurance etc. in the contract agreement;		
IFC PS 3: Resource Efficiency and Pollution Prevention The Project is currently in the construction phase. The observations related to resource efficiency and pollution prevention are made here based on the available operational phase information provided in the EIA report and other relevant documents. Further to this Wherever feasible, information related to the construction phase has also been captured based on the information collected during				
3.1	During the design, construction, operation and decommissioning of the project (project life cycle), the client is to consider ambient	It was reported by the EPC contractor that they are ensuring use of efficient construction	Aligned	During the physical inspection of the EPC contractor documentation, the monthly /quarterly monitoring of

	conditions and apply pollution prevention and control technologies and techniques	equipment and machines during the construction stage, meeting the emission standards applicable in Bangladesh. Resource efficiency in terms of construction materials, water consumption, energy consumption etc. is part of the design of the Project. The Project consists of a combined cycle power plant based on the advanced class Siemens gas turbine. The guaranteed NOx emission from the gas turbine is 60 ppm in natural gas and 80 ppm in Fuel. The EIA report mentions that the project will use cooling tower. Closure and decommissioning of the NWPGCL Power Plant may involve adverse impacts not perceived at		ambient air quality were found in place. The proponent should undertake regular monitoring of air emissions; water consumption; wastewater discharge; collection, storage and disposal of solid and hazardous wastes etc. in line with the ESIA.

		this stage of the project. Therefore, the ESMMP details the requirement for a detailed decommissioning and rehabilitation plan prior to closure of the power plant. Such a plan might include: strict adherence to all appropriate waste management techniques, including the reuse and recycling of materials wherever possible; disposable of hazardous waste materials in a legal and responsible manner; remediation of soil and/or groundwater contamination (if applicable); and rehabilitation and enhancement of Alignment with respect to EHS General Guidelines has been presented in Table 3.3		
3.2	The client will refer to the EHS Guidelines or other	Alignment with respect to EHS General	Aligned	NWPGCL has established time bound monitoring to EPC contractor in relation

	internationally recognized sources, as appropriate, when evaluating and selecting resource efficiency and pollution prevention and control techniques for the project.	Guidelines has been presented in Table 3.3		to EHS monitoring
3.3	Resource Efficiency: The client will implement technically and financially feasible and cost effective measures for improving efficiency in its consumption of energy, water, as well as other resources and material inputs, with a focus on areas that are considered core business activities.	The Project is based on cleaner fuel natural gas and higher efficiency combined cycle system and also during unavailability of natural gas it will use HSD.	Aligned	The project has using Si3D blade for the first time in turbine that supposed to enhance around 7 MW electricity generation. The project also using off grid solar (1kw) to ensure proper utilizing of power in a sustainable manner.
3.4	Greenhouse Gases: The client will consider alternatives and implement technically and financially feasible and cost-effective options to reduce project-related GHG emissions during the design and operation of the project. For projects that are expected to or currently produce more than 25,000 tonnes of CO2-equivalent annually, the client will quantify	In the EIA report annual GHG emission estimation from the Project has been calculated using CEET model, created by IFC. Based on that the total annual CO2 (equivalent) emission from the Project will be 241,776 tons. Furthermore, the ESIA states that NWPGCL	Aligned	NWPGCL developed methodology in order to quantify the issues. The calculation need to ensure during operation phase annually.

	direct emissions from the facilities owned or controlled within the physical project boundary, as well as indirect emissions associated with the off-site production of energy used by the project.	need to develop a climate change adaptation policy including monitoring, measurement and corrective actions for: Flood mitigation (safe access /egress during flood events / use of evacuation shelters);		
3.5	Water Consumption The client shall adopt measures that avoid or reduce water usage so that the project's water consumption does not have significant adverse impacts on others. These measures include, but are not limited to, the use of additional technically feasible water conservation measures within the client's operations, the use of alternative water supplies, water consumption offsets to reduce total demand for water resources to within the available supply, and evaluation of alternative project locations.	During construction, only a small amount of water will be required. Construction water will be taken from the existing on-site water treatment plant. The estimated water requirement for the plant is about 600 m3/hour (14,400 m3/day) during the operation phase of the project, primarily for steam generation and cooling water. This water requirement will be met by groundwater and recycling of cooling water. Deep tube wells are already in place	Aligned	NWPGCL has done the ground water assessment and according to the assessment, the ground water depletion was not significant.

		providing water to the water treatment plant on site. This existing plant can supply 30,000 m3 of water per day, which is sufficient for the operation of both Sirajganj 1 and 2.		
3.6	<u>Pollution Prevention:</u> To avoid release of pollutants or when avoidance is not feasible minimize or control the intensity or load of the release. To address potential adverse project impacts on existing ambient conditions, the client will consider relevant factors, including, for example • existing ambient conditions; • the finite assimilative capacity of the environment; • existing and future land use • The project's proximity to areas of importance to biodiversity; and	Baseline ambient air quality, noise, surface water and ground water monitoring were conducted as part of the EIA study. The results indicate that the particulate matter (SPM, PM10 and PM2.5) in the vicinity of the Project site are lower than the National Ambient Air Quality Standards (Bangladesh) and IFC EHS Guidelines / WHO Guidelines, whereas gaseous pollutants (SO2, NO2 and CO) concentrations are well within the limits. • Surface water	Aligned	Third party monitoring in place and generates report as per ESMP.

	• the potential for cumulative impacts with uncertain and/or irreversible consequences.	quality monitoring results of Jamuna River indicates that the primary impact on water quality is during the monsoon season when silt is washed into the river and the Total Suspended Solids (TSS) and Turbidity of the river water increases significantly, relative to pre-monsoon concentrations. • Ground water quality monitoring results indicate that the result is within the limit of DoE standard.		
3.7	<u>Wastes:</u> To avoid and minimize	The EPC contractor has engaged third party for	Aligned	Food and Solid waste management able to establish by EPC.

	generation of hazardous and non-hazardous waste materials as far as practicable. Where waste generation cannot be avoided, but has been minimized, the client will recover and reuse wastes, where wastes cannot be recovered or reused, the client will treat, destroy and dispose of in an environmentally sound manner. If the generated waste is considered hazardous, the client will explore commercially reasonable alternatives for its environmentally sound disposal, considering the limitations applicable to its trans boundary movement	collection and disposal of kitchen wastes (including waste food, bones, waste vegetables, waste fruits and etc. Food wastes); Hazardous wastes (including waste batteries. waste fluorescents, waste Mercury, waste medicines and etc.); other wastes (including any waste tiles. waste ceramics. soils, washroom waste and any other wastes which is difficult to recycling). During the site visit, it was observed that general housekeeping of the site is satisfactory. The EPC contractor has reported that 6 personnel have been engaged by them for the general housekeeping.		
3.8	<u>Hazardous Materials Management:</u>	The Project will not be involved in manufacturing, trade and use of chemicals and	Partially Aligned	The EPC contractor should revamp hazardous materials management plan/ SOPs as per ESIA. It should measure and regularly

	The client will avoid or, when avoidance is not possible, minimize and control the release of hazardous materials. In this context, the production, transportation, handling, storage, and use of hazardous materials for project activities should be assessed. The client will consider less hazardous substitutes where hazardous materials are intended to be used in manufacturing processes or other operations.	hazardous materials which are subjected to the international bans or phase outs due to their high toxicity to living organisms, environmental persistence and potential for bioaccumulation. During the construction phase, hazardous materials being stored at site are diesel and gas cylinders (oxygen, acetylene, propane). The EPC contractor maintains the inventory of the all the hazardous material being stored at site. Specific onsite observations have been provided in Table 3.4. The EIA report provides the inventory of key hazardous materials (natural gas, fuel oil, transformer oil, chlorine, sulphuric acid and caustic soda) with their likely storage quantities.		monitoring by EPC. Furthermore, subcontractors NEPC hazardous materials identification and measure tools was found available and they are implementing the tools adequately. Another sub-contractors NDE evidential document was not available for review during the trail. Material Safety Data Sheets (MSDS) are not readily available at all points where hazardous chemicals are stored or used.

3.9	Pesticide Use and Management: Formulate and implement an integrated pest management (IPM) and or integrated vector management (IVM) approach to pest management.	The EIA report specifies that EPC Contractor will be required to put in place a programme aimed at reducing the risk of occurrence of vector borne diseases among construction personnel. This needs to include elimination of potential insect breeding sites and provision of preventive medication, where applicable. It has been noted during the site assessment that the EPC contractor is not having an IPM and/or IVM plan for pest and vector management at present for the Project	Partial Aligned	During the audit trail, a document shared mentioning that they are following IPM in the project site followed by mentioning only use of mosquito replant. Other insects like rats issue are overlooked which is reported to largely found at the project site. Pesticide use and management need to implement at the project site by the authorized vendor. Pest management activity report need to also ensure by the vendor.
IFC PS 4: Community Health, Safety and Security				
4.1	The client will evaluate the risks and impacts to the health and safety of the Affected Communities during the project life-cycle and will establish preventive and control measures consistent with good	The EIA report provides key community health, safety and security impacts in the form of nuisance created due to the road/ river traffic and suggests for	Aligned	Emergency response plan-Disclosure to communities in the vicinity of the project on the emergency readiness of the company in case of any incidents happens was conducted by the NWPGCL.

	international industry practice (GP), such as in the World Bank Group Environmental, Health and Safety Guidelines (EHS Guidelines) or other internationally recognized sources	development of a traffic and transport management plan for the Project. It has further been noted in the EHS Plan of the EPC contractor that there is a need to develop a traffic and transport management plan for the project. However, no further details were available about the detailed traffic and transport management plan and its implementation on ground. In addition, no emergency response plan that identifies offsite risks, hazards, disasters and mitigation measures taken thereof has been developed for the Project, such as traffic impacts, workers influx and accommodation. The ESMS for construction phase states		

		that for emergency response: Appoint a suitably qualified Emergency Coordinator(s) and develop an Emergency Response Plan (ERP), covering all foreseeable emergencies, for approval by NWPGCL However, no action has been taken on the same.		
4.2	Infrastructure and Equipment Design and Safety: The client will design, construct, operate, and decommission the structural elements or components of the project in accordance with GP, taking into consideration safety risks to third parties or Affected Communities.	The Project Developer reported that the Project will design, construction and operation all the structural components of the Project in accordance with applicable Bangladeshi statutory requirements and international standards, as applicable. It has been reported that HAZOP studies have been conducted for the Plant design. However, these were not being	Partially Aligned	The EPC contractor should conduct a detailed QRA for the Project based on actual design and need to conduct standard HAZOP study.

		made available and reviewed as part of the compliance audit scope. The EIA states that the potential exists for project-specific impacts and 'domino effects' that required further assessment in detailed, site specific, quantitative risk assessment (QRS) in order to arrive at an 'As-low-as-reasonably-practicable (ALARP) situation through site specific mitigation and management measures. As the current H&S management system does not refer to the hazards associated with decommissioning phase, associated safety risks to third parties or Affected Communities are currently not identified.		
4.3	<u>Hazardous Materials Management and Safety:</u> The client will avoid or minimize	Refer 3.8 of this table	Partially Aligned	Refer 3.8 of this table

	the potential for community exposure to hazardous materials and substances that may be released by the project.			
4.4	<u>Community Exposure to Disease:</u> The client will avoid or minimize the potential for community exposure to water-borne, water-based, water related, and vector-borne diseases, and communicable diseases that could result from project activities. The client will avoid or minimize transmission of communicable diseases that may be associated with the influx of temporary or permanent project labour.	The EIA states that the EPC contractor will be required to put in place a programme aimed at reducing the risk of occurrence of vector borne diseases among construction personnel. This needs to include elimination of potential insect breeding sites and provision of preventive medication, where applicable. This further requires: 1. Regular check up of workers personnel's health by designated medical team. 2. Informing the workplace personnel of possible	Partially Aligned	The EPC contractors and its sub-contractors should conduct programme aimed at reducing the risk of occurrence of vector borne diseases among construction personnel.

		symptoms of diseases they might be exposed to and approaching on-site medical team as the necessity arises. 3. It has been noted that during the site visit it has been found that no adequate provisions have been made within the site for garbage collection and disposal.		
4.5	<u>Security Personnel</u> • Client to assess risks to those within and outside the project site from the security arrangements provided; • Providing training on rules of conduct, handling of security equipment to all the security personnel; • Provide a grievance	At the construction site, security services have been provided by private security company. Community consultations did not indicate any issues regarding the existing security arrangements.	Aligned	Recent approach we have found armed personnel has been set up in the entrance of the gate. Considering KPI area of government, NGPGCL has been engaged armed security personnel's. Proper training and knowledge need to share with the security personnel's so that carrying arms may not create any panic to the local community. Overall

	mechanism for the community to raise concerns about security arrangements; • Ensure that any unlawful or abusive acts by the security are investigated appropriately.			grievance process may not hampered. NGPGCL need to submit office order for install armed security personnel from respective concern authority end.
IFC PS 5: Land Acquisition and Involuntary Resettlement The components of the overall project that have resulted in land acquisition comprise: ✓ NWPGCL Power Plant unit 2; ✓ A 230KV Switching Station for the installation of an Electrical Sub-station (constructed by PGCB); ✓ Transmission line and approached road has been developed from unit 1				
5.1	The project will consider feasible alternative project designs to avoid or at least minimize physical or economic displacement, while balancing environmental, social, and financial costs and benefits, paying particular attention to impacts on the poor and vulnerable	The EIA report mentions that the There is no need for land acquisition. Additionally, there is no settlement in this designated area. Therefore, no population will be displaced and no resettlement will be required for the construction of the power plant. There is land lease agreement between BPDB and NWPGCL on	Aligned	

		dated 7-12-2014 with tenure of 25 years next. The total land is 7.5 acre. As per lease agreement NWPGCL has to pay Tk. 71, 28,5941: (Taka Seventy One Lac Twenty Eight Thousand Five Hundred Ninety Four) per annum for total 7.5 acres of land at per sft taka 21.82 per square feet. Per year to BPDP.		

Table 1-3: Gap Assessment to the IFC General EHS Guidelines and Thermal Power Plants

S. No	Requirement under IFC General EHS Guideline	Requirement under IFC Thermal Power Plants Guideline	Previous Observation/Gap	Level of Compliance	Recommendation
				2nd Audit	
1	**Environmental**				
1.1	Air Emissions & Ambient Air Quality				
1.1.1	Projects with significant sources of air emissions should prevent or minimize impacts by ensuring that: • Emissions do not result in pollutant concentrations that reach or exceed relevant ambient quality guidelines and standards by applying national legislated standards, or WHO Air Quality Guidelines • Guideline suggests emission at 25 percent of ambient quality guidelines and standards to allow	**Emissions Offsets Approach** Projects should minimize incremental impacts by achieving emissions values outlined in the EHS Guidelines for Thermal Power (or national requirements depending on which is more stringent). Where these emissions values result nonetheless in excessive ambient impacts relative to local ambient air quality regulatory	Baseline ambient air quality, noise, surface water and ground water monitoring were conducted as part of the EIA study.. The results indicate that the particulate matter (SPM, PM10 and PM2.5) in the vicinity of the Project site are lower than the National Ambient Air Quality Standards (Bangladesh) and IFC EHS Guidelines / WHO Guidelines, whereas gaseous pollutants (SO2, NO2 and CO) concentrations are well within the limits.	Aligned	Regular air quality monitoring is in place which conducting by third party. The monitoring data shared to both EPC and Proponent. No adverse effort found which overcome the country threshold.

S. No	Requirement under IFC General EHS Guideline	Requirement under IFC Thermal Power Plants Guideline	Previous Observation/Gap	Level of Compliance	Recommendation
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	additional, future sustainable development in the same air shed • Estimate by the use of baseline air quality assessments and atmospheric dispersion models	standards (or in their absence, other international recognized standards or guidelines, including World Health Organization guidelines), the project should explore and implement site-specific offsets that result in no net increase in the total emissions of those pollutants			
1.1.2	Point Sources Emissions from point sources should be avoided and controlled according to good international industry practice (GIIP) applicable to the relevant industry	• The primary emissions to air from the combustion of fossil fuels or biomass are sulphur dioxide (SO2), nitrogen	• Emissions from point sources of the Project will be from the main stack of combined cycle power plant, which will have the stack height as 60 m for better dispersion of pollutants.	Aligned	A sample date (17-07-2018) was reviewed during the audit and it was found CEMS system running with proper monitoring by proponent

S. No	Requirement under IFC General EHS Guideline	Requirement under IFC Thermal Power Plants Guideline	Previous Observation/Gap	Level of Compliance	Recommendation
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	sector	oxides (NOX), particulate matter (PM), carbon monoxide (CO), and greenhouse gases, such as carbon dioxide (CO2). • Depending on the fuel type and quality, mainly waste fuels or solid fuels, other substances such as heavy metals (i.e., mercury, arsenic, cadmium, vanadium, nickel, etc.), halide compounds (including hydrogen fluoride), unburned hydrocarbons	• Basic Environmental Design document of the Project mentions that the Plant will have a continuous emission monitoring system (CEMS) for monitoring of NOX, O2, SOX, CO, particulate, Temperature & pressure, Humidity, Pressure and flue gas flow. • The fuel composition states that there will be no sulphur content in the natural gas. Sulfur content may cause air pollution if HSD fuel is used. • The NOx emission guarantee provided by the gas turbine manufacturer during		

S. No	Requirement under IFC General EHS Guideline	Requirement under IFC Thermal Power Plants Guideline	Previous Observation/Gap	Level of Compliance	Recommendation
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		and other volatile organic compounds (VOCs) may be emitted in smaller quantities.	the full load are 61 ppm (Natural Gas) and 80 ppm (fuel oil). Moreover, during the peak load NOx emission will be 64ppm (natural gas) and 85 ppm (fuel oil).		
1.1.3	**Stack Height** The stack height for all point sources of emissions, whether 'significant' or not should be designed according to GIIP	-	Stack height for the main stack and bypass stack have been provided higher than the DoE guidelines for stack height.	Aligned	
1.1.4	**Greenhouse Gases (GHGs)** GHGs may be generated from direct emissions from facilities within the physical project boundary and indirect emissions associated with the off-site production of power	Carbon dioxide is emitted from the combustion of fossil fuels. Recommendations to avoid, minimize, and offset emissions of carbon dioxide from new and existing	Refer S. No. 3.4 of Table	Partially Aligned	Refer S. No. 3.4 of Table

S. No	Requirement under IFC General EHS Guideline	Requirement under IFC Thermal Power Plants Guideline	Previous Observation/Gap	Level of Compliance	Recommendation
				2nd Audit	
	used by the project. Recommendations for reduction and control of greenhouse gases include carbon financing and host of other approaches in the guideline	thermal power plants have been provided in the guideline			
1.2	**Energy Conservation**				
1.2.1	Applicability and Approach • Energy Management Programs • Energy Efficiency • Process heating • Process cooling • Compressed air systems	**Energy Consumption and Efficiency** Use of higher energy conversion efficiency technology of the same fuel type / power plant size than that of the country/region average. New facilities should be aimed to be in top quartile of the country/ region average of the same	Refer S. No. 3.3 of Table	Aligned	

S. No	Requirement under IFC General EHS Guideline	Requirement under IFC Thermal Power Plants Guideline	Previous Observation/Gap	Level of Compliance	Recommendation
				2nd Audit	
		fuel type and power plant size.			
1.3	**Wastewater and Ambient Water Quality**				
1.3.1	**Wastewater Management** • Industrial Wastewater Sanitary Wastewater • Emissions from Wastewater Treatment Operations • Residuals from Wastewater Treatment Operations • Occupational Health and Safety Issues in Wastewater Treatment Operations	Effluents from thermal power plants include thermal discharges, wastewater effluents, and sanitary wastewater Recommended water treatment and wastewater conservation methods are discussed in Sections 1.3 and 1.4, respectively, of the General EHS Guidelines. In addition, recommended measures to prevent minimize, and control wastewater	As mentioned in EIA report, ground water will be used in the cooling system and therefore, thermal discharge will be produced. In addition, plant effluent and domestic wastewater will be generated, and waste will also be produced. If they are inadequately handled, river water and underground water will be contaminated.	Aligned	Waste water treatment facilities capable of precipitation by condensation, neutralization and oil.

S. No	Requirement under IFC General EHS Guideline	Requirement under IFC Thermal Power Plants Guideline	Previous Observation/Gap	Level of Compliance	Recommendation
				2nd Audit	
		effluents from thermal power plants are provided in the guidelines. Sewage and other wastewater generated from washrooms, etc. are similar to domestic wastewater. Impacts and management of sanitary wastewater is addressed in Section 1.3 of the General EHS Guidelines			
1.3.2	**Monitoring:** A wastewater and water quality monitoring program with adequate resources and management oversight should be developed and implemented to meet the objective(s) of the monitoring program. The	Effluent guidelines are applicable for direct discharges of treated effluents to surface waters for general use. Guideline values include: pH = 6-9; TSS = 50 mg/l; O&G = 10 mg/l; Total	• Results came out form EIA and that is maximum amount of ammonia presence in water are 1.2 mg/l (as nitrogen molecule) which is used for pisciculture. For water used in irrigation, Electrical Conductivity-	Aligned	Water and wastewater quality monitoring was in place by EPC followed by ESIA

S. No	Requirement under IFC General EHS Guideline	Requirement under IFC Thermal Power Plants Guideline	Previous Observation/Gap	Level of Compliance	Recommendation
				2nd Audit	
	wastewater and water quality monitoring program should consider the following elements: ▪ Monitoring parameters ▪ Monitoring type and frequency ▪ Monitoring locations ▪ Data quality	residual chlorine = 0.2 mg/l; Total Chromium = 0.5 mg/l; Copper = 0.5 mg/l; Iron = 1.0 mg/l; Zinc = 1.0 mg/l; Lead = 0.5 mg/l; Cadmium = 0.1 mg/l; Mercury = 0.005 mg/l; Arsenic = 0.5 mg/l; and = EIA study to designed	2250 micro mho/cm (at 25oC). Sodium less than 26 mg/l* Boron less than 2 mg/l* • Ground water quality monitoring results indicate that arsenic is not present in the ground water and other parameters also within the limit of WHO and Bangladeshi standards. • Periodic monitoring of surface and ground water quality is not conducted by the EPC contractor.		
1.4	**Water Conservation**				
1.4.1	Water conservation programs should be implemented commensurate with the magnitude and cost of water use.	Water conservation measures may include water monitoring/ management techniques;	The power station will require in total about 1240 m3/hour of water for cooling purposes. Because of the uncertainty in the use of river water it has been	Aligned	Ground water recharge is occurred in feasible time.

S. No	Requirement under IFC General EHS Guideline	Requirement under IFC Thermal Power Plants Guideline	Previous Observation/Gap	Level of Compliance	Recommendation
				2nd Audit	
	These programs should promote the continuous reduction in water consumption and achieve savings in the water pumping, treatment and disposal costs.	process and cooling/ heating water recycling, reuse, and other techniques; and sanitary water conservation techniques	decided to evaluate groundwater resources of the project site and surrounding areas.		
1.5	**Hazardous Materials Management**				
1.5.1	Applicability and Approach	Hazardous materials stored and used at combustion facilities include solid, liquid, and gaseous waste-based fuels; air, water, and wastewater treatment chemicals; and equipment and facility maintenance chemicals (e.g., paint certain types of lubricants, and cleaners).	See 3.8 in Table	**Partially Aligned**	See 3.8 in Table
1.5.2	General Hazardous		During site walkthrough,	Partial Align	During the site visit, it was noted workers

S. No	Requirement under IFC General EHS Guideline	Requirement under IFC Thermal Power Plants Guideline	Previous Observation/Gap	Level of Compliance	Recommendation
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	Materials Management Hazard Assessment		HSD storage shed floor was observed with HSD spillage on ground during transfer from drum. Rainwater was also seen accumulated on floor of the HSD storage shed. EQMS interviewed workers involved in transferring HSD drums into the storage shed and they have communicated the general procedure of cleaning of HSD spill to EQMS where they have mentioned 'after any spillage on the floor worker will clean the surface clean the surface using water and water containing HSD will go into the out of the storage shed and it was noted that there is no drainage		has not enough knowledge for Hazardous materials dealing. Proper training need to ensure in this arena.
1.5.3	Management Actions Release Prevention and Control Planning Occupational Health and Safety Process Knowledge and Documentation				
1.5.4	Preventive Measures Hazardous Materials Transfer Overfill Protection Reaction, Fire, and Explosion Prevention				
1.5.5	Control Measures Secondary Containment (Liquids) Storage Tank and Piping Leak Detection Underground Storage Tanks (USTs)	Spill prevention and response guidance is addressed in Sections 1.5 and 3.7 of the General EHS Guidelines. In addition, recommended measures to prevent, minimize, and control			

S. No	Requirement under IFC General EHS Guideline	Requirement under IFC Thermal Power Plants Guideline	Previous Observation/Gap	Level of Compliance	Recommendation
				2nd Audit	
		hazards associated with hazardous materials storage and handling at thermal power plants include the use of double-walled containers for fuel oil storage etc	provided to the Storage shed and storage shed was also having an opening from where rain water can enter inside the storage shed.		
1.5.6	Management of Major Hazards Management Actions Preventive Measures Emergency Preparedness and Response Community Involvement and Awareness				
1.6	**Waste Management**				
1.6.1	1. Applicability and Approach 2. General Waste Management 3. Waste Management Planning 4. Waste Prevention	Recommended measures to prevent, minimize, and control the volume of solid wastes from thermal power plants have been presented	See 3.7 in Table	Partially Aligned	See 3.7 Table

S. No	Requirement under IFC General EHS Guideline	Requirement under IFC Thermal Power Plants Guideline	Previous Observation/Gap	Level of Compliance	Recommendation
				2nd Audit	
	5. Recycling and Reuse 6. Treatment and Disposal	in the guidelines.			
1.6.2	Hazardous Waste Management • Waste Storage • Transportation • Treatment and Disposal • Commercial or Government Waste Contractors • Small Quantities of Hazardous Waste • Monitoring	-			
1.7	**Noise**				
1.7.1	• Applicability • Prevention and Control • Noise Level Guidelines • Monitoring	Principal sources of noise in thermal power plants include the turbine generators and auxiliaries; boilers and auxiliaries, such as reciprocating	The ambient noise monitoring conducted as part of the ESIA study indicate that noise levels within the power plant complex and at boundary are meeting the applicable standards.	Aligned	The EPC contractor will provide necessary acoustic treatment as per contract to meet the near and far field noise standards. Further it has been noted that noise contours for the plant has already been completed by the EPC for plant design, however the same was not available for review. The guaranteed levels must meet

S. No	Requirement under IFC General EHS Guideline	Requirement under IFC Thermal Power Plants Guideline	Previous Observation/Gap	Level of Compliance	Recommendation
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		engines; fans and ductwork; pumps; compressors; condensers; precipitators, including rappers and plate vibrators; piping and valves; motors; transformers; circuit breakers; and cooling towers. Thermal power plants used for base load operation may operate continually while smaller plants may operate less frequently but still pose a significant source of noise if located in urban areas. Noise impacts, control measures, and recommended ambient noise levels are presented in			the compliance of country and IFC EHS guidelines.

S. No	Requirement under IFC General EHS Guideline	Requirement under IFC Thermal Power Plants Guideline	Previous Observation/Gap	Level of Compliance	Recommendation
				2nd Audit	
		Section 1.7 of the General EHS Guidelines. Additional recommended measures are presented in the guideline. Noise propagation models may be effective tools to help evaluate noise management options such as alternative plant locations, general arrangement of the plant and auxiliary equipment, building enclosure design, and, together with the results of a baseline noise assessment, expected compliance with the applicable community noise requirements.			

S. No	Requirement under IFC General EHS Guideline	Requirement under IFC Thermal Power Plants Guideline	Previous Observation/Gap	Level of Compliance	Recommendation
				2nd Audit	
1.8	**Contaminated Land**				
1.8.1	• Applicability and Approach • Risk Screening • Interim Risk Management • Detailed Risk Assessment • Permanent Risk Reduction Measures • Occupational Health and Safety Considerations		Potential sources of land contamination during the construction and operation phases of the Project will be solid and liquid wastes handling, disposal of sludge and hazardous materials spillage. Meanwhile, significant observations of potential soil and groundwater impact were observed during the site visit from the source of oil spill on landfill.	Partially Aligned	The EPC must be take necessary action in adhere to IFC standard in this context
2	Occupational Health and Safety (OHS)				
2.1.1	• Integrity of Workplace Structures	The following Occupational health and safety impacts are of particular concern	Occupational health and safety during the construction phase will be ensured by the EPC	Partially Aligned	It is suggested that compliance with respect to the H&S plans during construction and operation phases need to

S. No	Requirement under IFC General EHS Guideline	Requirement under IFC Thermal Power Plants Guideline	Previous Observation/Gap	Level of Compliance	Recommendation
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	• Severe Weather and Facility Shutdown • Workspace and Exit • Fire Precautions • Lavatories and Showers • Potable Water Supply • Clean Eating Area • Lighting • Safe Access • First Aid • Air Supply • Work Environment Temperature	during operation of thermal power plants: • Non-ionizing radiation • Heat • Noise • Confined spaces • Electrical hazards	contractor, which will need to develop the management system for this for pre-construction, construction and commissioning. **Integrity of Workplace Structures:** During the site visit, concrete structure at the cement storage area at the batching plant was seemed to be disturbed and gaps were seen between this concrete layer and the surrounding ground level. Cracks were also seen at the Laboratory rooms on the wall. Discussions with the civil engineer could not be held to get their feedback on this aspect. It perceived that cracks are formed due to heavy loading of the material on the floors and material adjacent to the		be monitored by NWPGCL Ensure that all the structural at the facility are free from any damaged or crack wherever poor workmanship is observed, site management should take appropriate actions. Initiate the Process for developing the procedure for severe weather condition and it's affect to the operation and also conduct mock drills to practice fail safe process shutdowns in line with the procedure and test the effectiveness of the SOP. Facility should prepare a monthly inspection schedule for fire extinguisher. Ensure the inspection schedule is being followed at the site for fire extinguisher. CMC and its sub-contractors are to prepared a NO Smoking policy and communicate the same to the workers. Adequate number of drinking water station to be installed at the facility. Water quality checks should be performed on routine basis.

S. No	Requirement under IFC General EHS Guideline	Requirement under IFC Thermal Power Plants Guideline	Previous Observation/Gap	Level of Compliance	Recommendation
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			walls. **Severe Weather and Facility Shutdown** CMC has not developed any Standard Operating Procedures (SOPs) for project or process shutdown and similarly no mock drills have been conducted to familiarize employees with the steps to be taken in case of Severe weather and Facility Shutdown. **Fire Precautions** Facility has provided the fire extinguisher at the construction site to extinguish fire at its incipient stage. During site walkthrough, it was observed that most of the hot works were not provided with the fire extinguisher or fire blanket. During site walkthrough, it		CMC is to prepare a site specific traffic management plan and prepare a separate walkways and heavy vehicular movement area needs to be identified. First aid boxes to be installed at conspicuous location within the construction site and it should be maintained with the minimum required medicine under the local regulation. It is recommended to implement the LOTO system. Ensure that the LOTO procedure is in place and implementation of the LOTO is ensured by training employees of Maintenance (Mechanical and Electrical) department. It is recommended to strengthen the hot work permit system and if required then please train people on various HOT work activities.

S. No	Requirement under IFC General EHS Guideline	Requirement under IFC Thermal Power Plants Guideline	Previous Observation/Gap	Level of Compliance	Recommendation
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			was observed that CMC employees are smoking inside the offices and throughout the site there is no strict adherence to the 'NO SMOKING' within the premises. **Portable Water supply** During site walkthrough, EQMS has observed one (1) places where drinking water facility was provided. Adequate supply of chilled water was not provided for the purposes of drinking. **Safe Access** CMC has not segregated the passageways for pedestrians and vehicles within premises for easy, safe, and appropriate access. Heavy vehicle movement consist of Crane, Cement mixers truck, Forklift etc. were seen		

S. No	Requirement under IFC General EHS Guideline	Requirement under IFC Thermal Power Plants Guideline	Previous Observation/Gap	Level of Compliance	Recommendation
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			inside the construction site. **First Aid** First aid boxes were available at first aid center. First aid boxes were provided at the construction site close to the workers. First aid boxes were also not equipped with required content as prescribed under local regulatory requirements. Ambulance reported to found share basis which was own by unit 1. But no document was not available for this agreement during the site visit. **Electrical Hazards** During site walkthrough, frayed insulation and exposed cable joints were observed. It was also observed that facility has no system related to Lock-		

S. No	Requirement under IFC General EHS Guideline	Requirement under IFC Thermal Power Plants Guideline	Previous Observation/Gap	Level of Compliance	Recommendation
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			out/Tag Out (LOTO) system in place to take precaution against accidental charging of the equipment's or distribution panels. Welding machines were identified with Sub-standard earthing. **Fire and explosion hazards** During site walkthrough, a good number of compressed gas cylinders were observed to be is use without securing it with chain. It is notable sub-contractors NEPC few cylinder found with securing chain in it.		
2.2	**Communication and Training**				
2.2.1	• OHS Training • Visitor Orientation	-	The EPC contractor is responsible for conducting OHS training for all the	Partially Aligned	CMC should prepare effective training schedule and conduct the training for all the workers. The key EHS classroom

S. No	Requirement under IFC General EHS Guideline	Requirement under IFC Thermal Power Plants Guideline	Previous Observation/Gap	Level of Compliance	Recommendation
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	• New Task Employee and Contractor Training • Basic OHS Training • Area Signage • Labelling of Equipment • Communicate Hazard Codes		CMC employees and contractors. OHS Training, Visitor Orientation, New Task Employee and Contractor Training As informed by Site management. During site walkthrough, One (1) welder working was interviewed and he explained that he has not undergone any job specific safety training. Basic site orientation training was not covering all site specific basic hazards, site specific hazards, and safe work practices, emergency procedures for natural disaster, and site-specific hazard. CMC is not conducting any new task special training for the construction workers at the site. During site walkthrough, EQMS		based training includes risk assessment, environmental aspects and impacts analysis; environmental awareness; permit to work and lock out/tag-out; control of asbestos; working at height; fire protection; and personal protective equipment (PPE). CMC should prepare visitor orientation and same should not be limited to the general safety rules, hazards at construction site, emergency exit routes, muster points etc. Facility should display the safety posters all around site for various activities work at height safety, Electrical safety, excavation safety, housekeeping, lifting activities, Personal Protective Equipment's etc. Ensure that all areas are assessing to identify hazards and appropriate hazard signage to be posted in vicinity of the area. Ensure that all vessels are appropriately labelled for the substances stored with their emergency actions against different scenarios like Fire, Spill etc.

S. No	Requirement under IFC General EHS Guideline	Requirement under IFC Thermal Power Plants Guideline	Previous Observation/Gap	Level of Compliance	Recommendation
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			interviewed workers involved in hot work in confined space. Worker has communicated that no training related to the confined space or any other job specific training being imparted at the site. **Visitor Orientation:** Facility has not developed any system for visitor OHS orientation before entering into the site. **Area Signage** Facility is yet to provide safety signage across the premises so as to ensure that these are easily understood by workers, visitors and the general public as appropriate. **Labeling of Equipment** Facility is yet to provide with appropriate labeling of vessel that may contain		Develop the Hazard Coding System and same should be displayed at the identified locations. Ensure addressing this in the existing emergency preparedness and response procedure.

S. No	Requirement under IFC General EHS Guideline	Requirement under IFC Thermal Power Plants Guideline	Previous Observation/Gap	Level of Compliance	Recommendation
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			substance that are hazardous as a result of chemical or toxicological properties. e.g. High Speed Diesel storage tanks are not labeled. Similarly piping systems that contain hazardous substances have not been labeled with the direction of flow and contents of the pipe. Communicate hazard codes Facility is yet to develop the hazard coding system at the facility to communicate emergency to workers and the outsiders.		
2.3	**Physical Hazards**				
2.3.1	• Rotating and Moving Equipment • Noise • Vibration • Electrical	**Heat Hazard** Occupational exposure to heat occurs during operation and maintenance of combustion units,	**Rotating and Moving Equipment** During site walkthrough, conveyors at the batching pant, Electrical motor with transmission belt were observed without machine	Partially Aligned	Facility should provide machine guarding to the identified machines at earliest. Identify all other rotating machine at the site and same should be included in the Pre checks.

S. No	Requirement under IFC General EHS Guideline	Requirement under IFC Thermal Power Plants Guideline	Previous Observation/Gap	Level of Compliance	Recommendation
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	• Eye Hazards • Welding / Hot Work • Industrial Vehicle Driving and Site Traffic • Working Environment Temperature • Ergonomics, Repetitive Motion, Manual Handling • Working at Heights • Illumination	pipes, and related hot equipment. Recommended prevention and control measures to address heat exposure at thermal power plants are presented in the guidelines. **Noise Hazards** Noise sources in combustion facilities include the turbine generators and auxiliaries; boilers and auxiliaries, such as diesel engines; fans and ductwork; pumps; compressors; condensers; precipitators, including rappers and plate vibrators; piping and valves; motors; transformers; circuit	guarding to its rotating part. **Noise** CMC is not conducting noise level surveys for its high noise exposure areas. During site visit, it was observed that contractors and employees in many such areas were working without noise protection gears. Signage related to noise protection were also not visible in the potential high noise area such as batching plant area etc. **Electrical** Following observation were made with respect to the electrical system at the site: Local Distribution electrical panel at the construction site were identified without any access control.		Facility should display posters and signage to noise hazard. CMC should consider following recommendation; Access control system to be established at all the electrical distribution panel and control should be given to the authorized personal. All damaged portable electrical boxes should be taken out immediately from use and replace the same with the new one. Pre-sue inspection to be used for welding activity and replace the damaged or non-operation thing. Damaged electrical cable and cable joints should be avoided to use and replaced with the new one or else cable joints should be prepared with industrial lugs. All electrical panels should be provided with the shed to protect against rain water

S. No	Requirement under IFC General EHS Guideline	Requirement under IFC Thermal Power Plants Guideline	Previous Observation/Gap	Level of Compliance	Recommendation
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		breakers; and cooling towers. Recommendations for reducing noise and vibration with additional recommendations to prevent, minimize, and control occupational noise exposures in thermal power plants are presented in the guideline. **Electrical Hazards** Energized equipment and power lines can pose electrical hazards for workers at thermal power plants. Recommended measures are presented in the guideline.	Portable electrical boxes used at the construction area were identified exposed cables and without any local Miniature Circuit Breaker (MCB). Welding cable was observed to be burnt due to frayed insulation and same was observed to be in use at the clarifier. Same incident was not investigated by the facility to identify route cause. Naked wires were seen directly inserted into the plugs at the NDE contractor workers dormitory. Electrical distribution panel were placed at the construction site without any protection against rainwater. At least two (2) instances were observed where water was		entering into the panels. It is recommended to prepare a cable route map for each area and it should be pasted neat to the area. Electrical Cables should be passed from any of the metallic structure and wherever it is necessary to take Should be only routed through nonmetallic protection. Flexible electrical cable should only be passing through ramp protection to avoid damage on the roads. It is recommended to review the 'HOT' work procedure and make necessary changes. Safety precautions such as stand-by fire extinguishers, stand-by fire watch, fire blanket, screen protection etc needs to be provided at every HOT work activity. CMC to establish traffic management plan and communicate the traffic management plan to the workers. Impart extensive trainings on the work at height safety. All the work at height activities should

S. No	Requirement under IFC General EHS Guideline	Requirement under IFC Thermal Power Plants Guideline	Previous Observation/Gap	Level of Compliance	Recommendation
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			accumulated on the top of the electrical panel it was going inside the electrical panel. It may give away spark in case of water enters into the receptacles. Electrical flexible cables were seen trailing and laid on the ground and it was passing also passing from the access roads. It was also observed that electrical cables were passing through scaffold structure. Which was posing an electrocution hazards **Welding/Hot Work** During document review, It was identified that HOT work procedure only talks about HOT work permit. It does not talk about hot work safety precautions, roles and responsibilities, area identification for hot		prepare a Job Hazard Analysis before starting activities and implement the corrective actions to complete the job safely. Identify the activities wherein work at height is required, based on the risk assessment conducted and consider making visual displays which can provide information to the personnel about the various conditions during which the work at height related precautions needs to be taken and also trigger the requirement for obtaining requisite work permit and also involvement of the onsite safety officers. It is also recommended to strengthen the supervision team for work at height activities.

S. No	Requirement under IFC General EHS Guideline	Requirement under IFC Thermal Power Plants Guideline	Previous Observation/Gap	Level of Compliance	Recommendation
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			work etc. During site walkthrough, welding and gas cutting activities were observed Safety precautions such as stand-by fire extinguishers, stand-by fire watch were not available at the activity area. **Industrial Vehicle Driving** CMC has not established a traffic management plan for the traffic control inside the facility premises. Operators of the material handling equipment, fuel tankers, and cranes, cement mixer were identified to be Driving at speed exceeding the stipulated speed limit. There is no separate demarcation for pedestrians and the vehicles plying inside the facility. During site walkthrough.		

S. No	Requirement under IFC General EHS Guideline	Requirement under IFC Thermal Power Plants Guideline	Previous Observation/Gap	Level of Compliance 2nd Audit	Recommendation
			EQMS interviewed excavator driver and asked for the relevant heavy vehicle driving license and found that the driver was carrying the same but the vehicle seat belt is not working properly. **Working at height** Personnel were observed to be working at height at various parts of the plant involving various contractor personnel. Some of these personnel were not even adhering to the basic protection required i.e. wearing and anchoring the full body safety harness.		
2.4	**Chemical Hazards**				
2.4.1	• Air Quality • Fire and Explosions • Corrosive,	**Fire and Explosion Hazard** Thermal power	The EIA report has identified potential hazards such as fire and explosions,	Partially Aligned	Consequence analysis of chlorine storage should be included as part of the risk assessment.

S. No	Requirement under IFC General EHS Guideline	Requirement under IFC Thermal Power Plants Guideline	Previous Observation/Gap	Level of Compliance	Recommendation
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	oxidizing, and reactive chemicals • Asbestos Containing Materials (ACM)	plants store, transfer, and use large quantities of fuels; therefore, careful handling is necessary to mitigate fire and explosion risks. In particular, fire and explosion hazards increase as the particle size of coal is reduced. Fire and explosion prevention management guidance is provided in Section 2.1 and 2.4 of the General EHS Guidelines. Additional recommended measures are presented in the guideline. **Chemical Hazards** Thermal power	and associated with hazardous chemicals. The hazard and risk assessment policy of this site was not available during the site visit. However, during the policy preparation a details consequence analysis of chlorine storage need to be incorporate.		

S. No	Requirement under IFC General EHS Guideline	Requirement under IFC Thermal Power Plants Guideline	Previous Observation/Gap	Level of Compliance	Recommendation
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		plants utilize hazardous materials, including ammonia for NOX control systems, and chlorine gas for treatment of cooling tower and boiler water. Guidance on chemical hazards management is provided in Section 2.4 of the General EHS Guidelines. Additional, recommended measures are presented in the guideline.			
2.4.2	Personal Protective Equipment (PPE)		CMC has defined Safety shoes, Safety helmet and Safety Vest as mandatory PPEs. CMC has not prepared a PPE matrix for all the	Partially Aligned	This can be addressed in an OHS plan, and include training on the importance of PPE use, and PPE maintenance.

S. No	Requirement under IFC General EHS Guideline	Requirement under IFC Thermal Power Plants Guideline	Previous Observation/Gap	Level of Compliance	Recommendation
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			activities at the construction site. Specific observations related to the PPE non-compliance have been already discussed in S. No. 2.9 of Table 3.2.		
2.4.3	**Special Hazard Environments** • Confined Space • Lone and Isolated Workers	**Confined Spaces** Specific areas for confined space entry may include coal ash containers, turbines, condensers, and cooling water towers (during maintenance activities). Recommend confined space entry procedures are discussed in Section 2.8 of the General EHS Guidelines.	Facility has not identified as those yet to develop. EPC contractor still working on the contraction phase.	Partially Aligned	It is suggested CMC should have developed a procedure and impart training on the same to confined space entrants and supervisor. All confined spaces work/activity needs to be evaluated prior to the job and artificial ventilation requirement needs to discuss at the time permit issuance.
3	**Community Health and Safety**				
3.1	Water Quality and	-	Refer S. No. 4.1 Table 3.2	Partially	There is a need to conduct surface water

S. No	Requirement under IFC General EHS Guideline	Requirement under IFC Thermal Power Plants Guideline	Previous Observation/Gap	Level of Compliance	Recommendation
				2nd Audit	
	Availability			Aligned	monitoring at water intake and outfall locations by EPC.
3.2	**Life and Fire Safety (L&FS)**				
3.3	• Applicability and Approach • Specific Requirements for New Buildings • L&FS Master Plan Review and Approval • Specific Requirements for Existing Buildings • Other Hazards	-	These aspects are covered in hazard and risk assessment in EIA study as well as HSE management system of the EPC contractor. It is further to be noted that site-specific Hazard and Risk Assessment for the plant site required. it provides guidelines to undertaking risk assessment and formulating an emergency response plan (ERP) for the development project. The potential exists for project-specific impact and domino effects that requires further assessment in a detailed, site-specific, quantitative risk assessment (QRA) in order to arrive at an As-Low-As Reasonably-	Partially Aligned	Conduct a detailed QRA for the Project based on actual design and formulate an emergency response plan.

S. No	Requirement under IFC General EHS Guideline	Requirement under IFC Thermal Power Plants Guideline	Previous Observation/Gap	Level of Compliance	Recommendation
				2nd Audit	
			practicable (ALARP) situation through site specific mitigation and management measures. It was reported that life and fire protection measures such as preventive mechanism / system alarms, portable fire extinguishers as well as fire hydrants were provided as part of the Project. Fire training of construction workers will be conducted onward. Fire alarms and Public Address System (PAS) will be installed. -		
3.4	Traffic Safety	Operation of a thermal power plant will increase traffic volume, in particular for facilities with fuels transported via land and sea, including	During the construction phase of the Project, traffic movement will be outside the plant area for material carrying heavy vehicles and within site for construction activities. It has been noted	Partially Aligned	The EPC contractor shall develop a traffic and transportation management plan taking into consideration workers and community safety.

S. No	Requirement under IFC General EHS Guideline	Requirement under IFC Thermal Power Plants Guideline	Previous Observation/Gap	Level of Compliance	Recommendation
				2nd Audit	
		heavy trucks carrying fuel, additives, etc. The increased traffic can be especially significant in sparsely populate areas where some thermal power plants are located. Prevention and control of traffic related injuries are discussed in Section 3.4 of the General EHS Guidelines.	that EPC contractor has to develop a framework for traffic and transportation management. However, as specified in the EHS Plan as well as in the ESMP, no site specific traffic and transportation management plan has been developed for road and rive traffic.		
3.5	Transport of Hazardous Materials • General Hazardous Materials Transport • Major Transportation Hazards		The EIA report states that fuel oil, transformer oil, chlorine, sulphuric acid are hazardous chemicals in respect of their transportation, storage and use which are to be considered as major accidental hazard (MAH) and ESMP provides preventive and control	Partially Aligned	EPC contractor need to more cautious and create much awareness during the transportation of hazard materials. NWPGCL should ensure that transport of hazardous chemicals follows the Applicable Standards.

S. No	Requirement under IFC General EHS Guideline	Requirement under IFC Thermal Power Plants Guideline	Previous Observation/Gap	Level of Compliance	Recommendation
				2nd Audit	
			measures for safe transportation.		
3.6	**Disease Prevention** • Communicable Diseases • Vector-Borne Diseases	The ESMP states that the EPC contractor will be required to put in place a programme aimed at reducing the risk of occurrence of vector-borne diseases among construction personnel. This needs to include elimination of potential insect breeding sites and provision of preventive medication, where applicable. This further requires: • Regular check of workplace medical team. • Informing the workplace		Partial Aligned	EPC contractor should establish a clear preventative process in order to prevent vector –borne diseases.

S. No	Requirement under IFC General EHS Guideline	Requirement under IFC Thermal Power Plants Guideline	Previous Observation/Gap	Level of Compliance	Recommendation
				2nd Audit	
		personnel of possible symptoms of diseases they might be exposed to and approaching on-site medical team as the necessity arises. It has been noted that adequate provisions have been not made within the site for wastewater, garbage collection and disposal.			
4	Construction and Decommissioning				
4.1	Environment • Noise and		EIA of the Project addresses the impacts during	Insufficient Information	NWPGCL should ensure that impacts associated with the decommissioning

S. No	Requirement under IFC General EHS Guideline	Requirement under IFC Thermal Power Plants Guideline	Previous Observation/Gap	Level of Compliance	Recommendation
				2nd Audit	
	Vibration • Soil Erosion • Air Quality • Solid Waste • Hazardous Materials • Wastewater Discharges • Contaminated Land		construction phase of the Project and provides mitigation measures in the ESMP. Closure and decommissioning of the unit 2 Power Plant may involve adverse impacts not perceived at this stage of the project. Therefore, the ESMP details the requirement for a detailed decommissioning and rehabilitation plan prior to closure of the power plant. Such a plan might include: strict adherence to all appropriate waste management techniques, including the reuse and recycling of materials wherever possible; disposable of hazardous waste materials in a legal and responsible manner; remediation of soil and/or groundwater contamination	for the assessment	phase are assessed and addressed at least 1 to 2 years prior to eventual decommissioning.

S. No	Requirement under IFC General EHS Guideline	Requirement under IFC Thermal Power Plants Guideline	Previous Observation/Gap	Level of Compliance	Recommendation
				2nd Audit	
			(if applicable); and rehabilitation and enhancement of terrestrial habitats within the power plants footprints.		
4.2	Occupational Health and Safety issues • Over exertion • Slips and falls • Work in heights • Struck by objects • Moving Machinery • Dust • Confined Spaces and Excavations • Other Site Hazards		Refer S. No. 2.9 of Table	Partially Aligned	Refer S. No. 2.9 of Table
4.3	Community Health and Safety issues		Refer S. No. 4.1 of Table	Partially Aligned	Refer S. No. 4.1 of Table

Table 1-4: Key Regulatory Compliance and Gap Assessment

S. No	Regulatory Requirement	Finding /Observation Compliance	Compliance Rating	Implication
			Initial Audit	
1	**EIA Approval under Environmental Conservation Rules, 1997**			
1.1	EIA Approval	• Site clearance certificate was received from the DoE • .	Aligned	
2	**NOC from Bangladesh Inland Water Transport Authority**			
2.1	Construction and operation of temporary jetty	NOC has been obtained from BWTA	Aligned	
3.	**The Bangladesh Petroleum Act,1934 and The Petroleum Rules, 1937; as amended till 1989**			
3.1	License for HSD Storage: Section 7 of Petroleum Act, 1934: No license is required for transport or storage class II petroleum if the total quantity in his possession at any one place does not exceed 2000 litters and none of it contained in a receptacles exceeding in capacity Rule 90 of The Petroleum Rules, 1937; as amended till 1989: Save as provided in section 7, 8 and 9 of the Act and by Rule 109 no one	During site walkthrough, it was observed that facility at present store class 'B' petroleum product at HSD storage.	Aligned	NWPGCL Awarded a valid license under Petroleum Act and Rules

S. No	Regulatory Requirement	Finding /Observation Compliance	Compliance Rating	Implication
			Initial Audit	
	shall store any petroleum except under a license granted under these rules:			
3.2	Restriction on delivery and dispatch of petroleum Rule 29(03) of The Petroleum Rules, 1937; as amended till 1989: No person shall deliver any petroleum in bulk to any vessel or vehicle used for the transport of petroleum in bulk by water or by land unless such vessel or vehicle is licensed under these rules.	During document review, EQMS has asked for records pertaining to the HSD vendor license, approved vehicle license etc. from CMC to review and documents were not readily available for EQMS review.	Partial Aligned	
4	**LPG Gas Rules, 2004**			
4.1	License Requirement: Rule 14(02) of LPG Gas Rules, 2004: No person is allowed to store LPG without License.	During site walkthrough, it was observed that facility is using LPG (Propane) cylinder for gas cutting set. Facility at present using following quantities of the LPG cylinders; It was noted that facility at present not holding valid license to store LPG cylinders	Aligned	Obtain a NOC from department of fire service and civil defense for using the explosive materials.
4.2	Labeling of Cylinders:	During site walkthrough, it was observed that LPG cylinders used at site were not provided	Partial Aligned	Labeling of Cylinders was found in practice

S. No	Regulatory Requirement	Finding /Observation Compliance	Compliance Rating	Implication
			Initial Audit	
	Rule 61(01) of LPG Gas Rules, 2004: Every cylinder shall be labeled with the name of the gas and the name and address of the person by whom the cylinder was filled with gas. Rule 61(02) of LPG Gas Rules, 2004: All the LPG cylinders should be pasted with warning symbol and warning statement	with label and warning sign & statement.		but not up to the mark of standard. Need to that LPG cylinders are marked with name of the gas and the name and address of the person by whom the cylinder was filled with gas. Following things to be displayed at the cylinder storage area; (a) Highly inflammable; No Smoking; (b) Do not change the colour of this cylinder; (c) No flammable material should be stored in the close vicinity of this cylinder or in the same room in which it is kept.

S. No	Regulatory Requirement	Finding /Observation Compliance	Compliance Rating Initial Audit	Implication
				(d) Gas cylinder should not be kept horizontally; (e) No oil or similar lubricant should be used on the valves or other fittings of this cylinder; (f) Please look for the next date of test, which is marked on a metal ring inserted between the valve and the neck of the cylinder, and if this date is over, do not accept the cylinder for filling.
4.3	Fire- fighting equipment: Rule 71 (01) of LPG Gas Rules, 2004: Each LPG storage premises should keep adequate numbers of fire extinguisher and fire-fighting equipment.	During site walkthrough and Document review, it was observed that LPG storage area was fit with fire extinguisher but workers were also not trained on how to use fire extinguisher.	Aligned	During the sample test, it is found worker are trained to use fire extinguisher.

S. No	Regulatory Requirement	Finding /Observation Compliance	Compliance Rating	Implication
			Initial Audit	
	Rule 71 (02) of LPG Gas Rules, 2004: All fire-fighting equipment needs to be kept ready at all times. Rule 71 (03) of LPG Gas Rules, 2004: The workers working in the premises should have expertise on using fire-fighting equipment.			
5	**Gas Cylinder Rules,1991**			
5.1	License requirement: Rule 39 of Gas Cylinder Rules, 1991: As specified under Rule 39, no person is allowed to fill or store cylinder without license	During site walkthrough, EQMS observed compressed gas cylinders (Oxygen (O2), Acetylene) were stored and used at the site for various activities. At present, site has not applied for license for storing compressed gas cylinder on site therefore it is in non-compliance with Gas Cylinder Rules.	Aligned	During the site visit, it was recorded a total of 7 acetylene cylinders was found at the project site. As per Cylinder Storage form (Cha), the number as it was below 10, no extra license required as per Gas Cylinder Rules, 1991.
5.2	Storage conditions of Cylinders:	During site walkthrough, it was observed that	Aligned	

S. No	Regulatory Requirement	Finding /Observation Compliance	Compliance Rating	Implication
			Initial Audit	
	Rule 20(01) of Gas Cylinder Rules,1991: Cylinders shall be stored in a cool, dry, well ventilated place under cover, away from boilers, open flames, steam pipes or any potential sources of heat and such place of storage shall be easily accessible. Rule 20(05) of Gas Cylinder Rules, 1991: Cylinders shall not be stored under conditions, which will cause them to corrode. Rule 20(07) of Gas Cylinder Rules, 1991: Empty cylinders shall be segregated from the filled ones and care shall be taken that all the valves are tightly shut. Rule 20(04) of Gas Cylinder	compressed gas cylinders were stored in a cage. It was also noted that compressed gas cylinder storage area was identified proper segregation of the filled and non-filled compressed gas cylinders.		

S. No	Regulatory Requirement	Finding /Observation Compliance	Compliance Rating	Implication
			Initial Audit	
	Rules, 1991: Cylinders containing flammable gases and toxic gases shall be kept separated from each other and from cylinder			

2. CORRECTIVE ACTION PLAN

Based on the independent EHS&S Compliance Audit of Sirajganj 225 Mw Combined Cycle Power Plant, during the construction phase, a Corrective Action Plan (CAP) (Table 4.1) has been prepared by prioritizing the key issues and recommendations from the gap assessment.

The CAP has been organized to include the following:

- Measure and corrective actions;
- Reference to the findings in the report;
- Significance;
- Responsibilities;
- Deliverables; and
- Description of the recommendation;
- Timelines for completion.

Table 2-1: Corrective Action Plan

SL#	Measures and/or Corrective Actions	Reference in the audit Report	Significance	Responsibility	Deliverables	Suggested Timelines for Completion
1	**PS 1: Assessment and Management of Environmental and Social Risks and Impacts**					
1.1	Project Implantation Unit (PIU) to oversee EHS compliance of the Project during construction phase	S. No. 1.1	N/A	NWPGCL	Proper implementation and monitoring by PIU	Implemented and to be continued
1.2	Appoint a trained EHS Personnel for day to day monitoring of the EHS Plan and ESMP implementation	S. No. 1.1, 2.9	N/A	EPC Contractor	EHS Officer for the Project	Implemented
1.3	• Ensure that all the records should also be made available in local language/ English by the EPC contractor especially daily health check facilities by NEPC • Review of all the records being maintained as part of EHS Plan by the EPC contractor;	S. No. 1.1, 1.10, 3.7	N/A	NWPGCL and EPC Contractor	Records Review and Corrective Actions. CAP implementation need to act on measureable and time bound manner	Implemented
1.4	Display and communicate environment and health and safety policies of the company	S. No. 1.2	N/A	NWPGCL and EPC Contractor	Disclosure of Env and health safety policies	Implemented

SL#	Measures and/or Corrective Actions	Reference in the audit Report	Significance	Responsibility	Deliverables	Suggested Timelines for Completion
					policies	
1.5	Develop and maintain legal register for all the Project components	S. No. 1.4	Low	NWPGCL	Legal Register for Construction phase need to update regularly	Implemented and to be continued
1.6	Comply with the findings (Partial aligned) and recommendations	Table – relevant to all PA	Medium	NWPGCL and EPC Contractor	Legal compliance and CAP	30 October 2018
1.7	Update the ESMP with defined action items, responsibilities, monitoring indicators and review/ audit	S. No. 1.5,	Medium	NWPGCL and EPC Contractor	Conduct ESMS implementation and continuation	Proper implementation of ESMS need to ensure by 30 October 2018
1.8	Develop an organizational structure for the construction and operation phase of the Project with defined roles and responsibilities	S. No. 1.6	N/A	EPC Contractor	Organization Structure developed	Implemented
1.09	Training of NWPGCL Staff and EHS team of EPC Contractor on ESMP	S. No. 1.7, 2.9	N/A	NWPGCL	Training Calendar (Construction phase). Need to conduct independent	Implemented and to be continued

SL#	Measures and/or Corrective Actions	Reference in the audit Report	Significance	Responsibility	Deliverables	Suggested Timelines for Completion
					assessment and review of training progress and evaluation	
1.10	Develop an emergency response plan into a consolidated document with: • Identification of, including risks associated with all project components; • Key community and environmental sensitivities (such as village settlements, ponds, etc.) and the potential of offsite consequences along with mitigation measures; • A common communication and emergency response process flow for onsite emergencies as well as their communication to authorities offsite; • Disclosure to communities in the vicinity of the project on the emergency readiness of the company in case of any incidents	S. No. 1.8, 4.1 and 4.6	N/A	NWPGCL	Emergency Response Plan for Construction phase (both on site and off site)	Implemented
1.11	Consider preparing a detailed GRM	S. No. 1.12	N/A	NWPGCL	Review GRM process	Implemented and to be continued

SL#	Measures and/or Corrective Actions	Reference in the audit Report	Significance	Responsibility	Deliverables	Suggested Timelines for Completion
					Find the root cause analysis for null GRM issues Proper documentation and discussion about the issues including monthly meeting, corporate level etc .(Construction	
2.	**PS 2: Labor and Working Conditions**					
2.1	Improve the conditions of the migrant workers- better accommodation and clearly articulated terms and conditions of employment	S. No. 2.3	Low	EPC Contractor	Construction phase is merely on the verse of closing. Most of the labour shed was not functioning.	30 September 2018

SL#	Measures and/or Corrective Actions	Reference in the audit Report	Significance	Responsibility	Deliverables	Suggested Timelines for Completion
					No of labors engagement reached below 50. Overall, shed facilities decreased . Condition need to improve as per PS 2	
2.2	Clear labour construction camp guidelines to be formulated and shared with NWPGCL. The guidelines should take into consideration observations highlighted in the report.	S. No. 2.4	Medium	EPC Contractor	Labour construction camp guidelines and followed by measurable implementation	30 September 2018
2.4	The Project should establish channels for management and workers to communicate and for the workers to place their concerns as well as suggestions. The grievance process should be made accessible for construction workforce and	S. No. 2.7	N/A	NWPGCL and EPC Contractor	Grievance redressal mechanism review and implementation	Implemented and to be continued

SL#	Measures and/or Corrective Actions	Reference in the audit Report	Significance	Responsibility	Deliverables	Suggested Timelines for Completion
	should enable workforce to raise anonymous complaints. The grievance records should be properly documented, tracked and reviewed for redressed of the Grievances.					
2.5	The EPC contractor's position on non-employment of child, forced or bonded labour has to be clearly stipulated more specifically to the sub-contractors and their associated workforce. There should be proper checks and verification systems in place for the workforce to ensure no cases of child labor or forced labor are not allowed within the site premises.	Table 3.2, S. No. 2.8	N/A	NWPGCL and EPC Contractor	Sub-Contractors management policy need to incorporate in NWPGCL HR policy and subsequently also the EPC and its relevant sub-contractors. The policy definitely abide by the country law and international good practice standard.	Implemented and to be continued

SL#	Measures and/or Corrective Actions	Reference in the audit Report	Significance	Responsibility	Deliverables	Suggested Timelines for Completion
2.6	Develop a site-specific health and safety manual including SOPs to protect the construction injuries.	S. No. 2.9	N/A	EPC Contractor	HSE Plan of EPC contractor	Implemented
2.7	Develop a work permit system to carry out non-routine jobs at the construction site.	S. No. 2.9	N/A	EPC Contractor	Work permit system for non-routine jobs	Implemented
2.8	Prepare a pre-use inspection checklist (activity and equipment specific) and it should be performed and attach with every permit before starting of activity.	S. No. 2.9	N/A	EPC Contractor	EPC Contract Activity and equipment specific checklist	Implemented
2.9	Conducts training program to increase the knowledge of the safety department.	S. No. 2.9	N/A	EPC Contractor	EPC Contract Training Records followed annual calendar	Implemented
2.10	Recruit a qualified doctor to work at first aid center especially NDE	S. No. 2.9	Medium	EPC Contractor	Qualified doctor at site clinic	Need to ensure doctor/medical facilities for NDE labors / need to implement by 31 August 2018
2.11	Prepare an Accident & Investigation	S. No. 2.9	N/A	EPC	EPC Contract	Implementation.

SL#	Measures and/or Corrective Actions	Reference in the audit Report	Significance	Responsibility	Deliverables	Suggested Timelines for Completion
	register to include the information related to the accident.			Contractor	Accident & investigation register	
2.12	Carryout hazard identification and risk assessment (HIRA) for all construction and associated activities and preparation of SOPs	S. No. 2.9	Medium	EPC Contractor	EPC Contract HIRA Register and SOPs	30 September 2018
2.13	Carry out inspection for the potential hazards at the facility and provide the risk control as per the hierarchy of control	S. No. 2.9, S. No. 2.1.1 (OHS)	N/A	EPC Contractor	Risk control measures	Implemented and to be continued
2.14	Provide training to workers, supervisors and employees on importance and usage of PPEs for different activities and organize PPE awareness program.	Table 3.2, S. No. 2.9 Table 3.3, S. No. 2.1.1 (Training)	N/A	EPC Contractor	Training Calendar	Implemented
2.15	Prepare a PPE program for the facility and program should cover the following essential elements: • Workplace Survey; • Selecting appropriate controls; • Training;	S. No. 2.9	N/A	EPC Contractor	PPE Implementation Program	Implemented

SL#	Measures and/or Corrective Actions	Reference in the audit Report	Significance	Responsibility	Deliverables	Suggested Timelines for Completion
	• Maintenance; • Audit of the program.					
2.16	Prepare training modules for job specific trainings and identify workers required to undergo job specific trainings.	S. No. 2.9	Medium	EPC Contractor	Training modules	30 September 2018
2.17	Conduct the first aid training with the help of qualified first aider and make sure that first aiders are available at all times at facility.	S. No. 2.9	N/A	EPC Contractor	First aid trainings	Implemented
2.18	Develop a standard operating procedure on incident investigation with roles and responsibilities.	S. No. 2.9	N/A	EPC Contractor	Incident investigation SOP	Implemented
2.19	Start preparing the accident/ incident statistics for each and every area and start identifying the area of concerns and prepare an action plan to address the issues by mean of alternate work procedure, trainings, special attention to the high risk jobs, increase in number of supervisor for high risk jobs	S. No. 2.9	Medium	EPC Contractor	Statistical analysis of accident/ incident data and corrective action plan	30 September 2018
2.20	NWPGCL will need to put in place a formal contractor management system to audit its contractors as well as those of the EPC contractor. The management system should include:	Table 3.2, S. No. 2.10	N/A	NWPGCL	Contractor Management System as per ESMS	Implemented

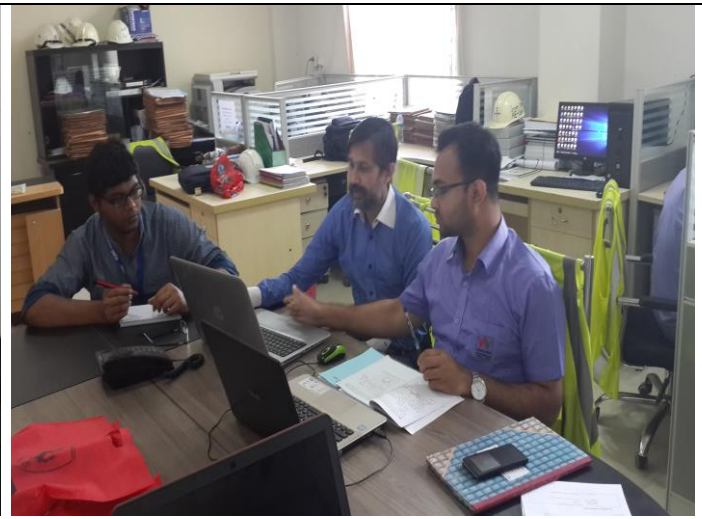
SL#	Measures and/or Corrective Actions	Reference in the audit Report	Significance	Responsibility	Deliverables	Suggested Timelines for Completion
	• Compliance checklist against the Applicable Standards; • Criterion on contractor selection to minimize HSE or labour related risks and issues at the time of engagement; • Monitoring and audit procedures; and Further the EPC contractor and the sub-contractor should be made responsible for the insurance of the workers mobilized at the site.					
3	PS 3: Resource Efficiency and Pollution Prevention					
3.1	Ensure that all the ESMP implementation requirements during construction phase are being clearly provided to the EPC contractor and implementation of mitigation measures along with records should be reviewed by EHS Officer of the NWPGCL	S. No. 3.1	N/A	NWPGCL and EPC Contractor	ESMP implementation evaluation	Implemented and to be continued
3.2	Undertake regular monitoring of air emissions, water consumption, wastewater discharge, solid and hazardous waste disposal, noise levels, in line with the ESIA	S. No. 3.1	N/A	EPC Contractor	As per ESIA requirement	Implemented

SL#	Measures and/or Corrective Actions	Reference in the audit Report	Significance	Responsibility	Deliverables	Suggested Timelines for Completion
3.3	Ensure that impacts associated with the decommissioning phase are assessed and addressed prior to eventual decommissioning.	S. No. 3.1 S. No. 4.1	Low	NWPGCL	Impact assessment for decommissioning phase.	1 to 2 years prior to eventual decommissioning.
3.4	Complete an annual GHG emissions estimation based on the actual operations of the Project during the operational phase.	S. No. 3.4 S. No. 1.1.7	High	NWPGCL	GHG estimation and reporting.	Annually, after one year of COD
3.5	Develop the climate adaptation policy and procedures in line with the requirements specified in the ESMP.	Table 3.2, S. No. 3.4	High	NWPGCL	Climate Change Adaptation Policy	Within 12 months of COD (Plant Operations
3.6	Develop a Waste Management Plan for operation phase.	Table 3.2, S. No. 3.7 Table 3.3, S. No. 1.6	Low	NWPGCL	Waste inventory and disposal options.	Before COD
3.7	Develop a detail and effective Hazardous Materials Management (HMM) Plans.	Table 3.2, S. No. 3.8 Table 3.3, S. No. 1.5	Medium	EPC Contractor	HMM Plan. - Construction phase	30 September 2018
3.8	• Ensure that spillage kit is available at the HSD storage area. • Provide drainage system to the HSD	Table 3.3, S. No. 1.5.2	N/A	EPC Contractor	Spillage management plan	Implemented

SL#	Measures and/or Corrective Actions	Reference in the audit Report	Significance	Responsibility	Deliverables	Suggested Timelines for Completion
	storage shed to collect the rain water and waste water generated after floor cleaning. • Prepare a procedure for the HSD loading & unloading and spill control and trained workers for the same. • Prepare a list of the authorized person and same should be pasted outside the storage shed area and • access control system to be implemented.					
3.9	Develop a Standard Operating Procedure for Pest Management for the Project.	S. No. 3.9	High	NWPGCL, EPC Contractor	Standard Operating Procedure for Pest Management.	30 September 2018
3.10	Ensure no use of asbestos containing material is specified in the design of the Project.	S. No. 2.4.1	N/A	NWPGCL	Written confirmation that no asbestos will be used in the Project development from newly purchased materials.	Implemented

SL#	Measures and/or Corrective Actions	Reference in the audit Report	Significance	Responsibility	Deliverables	Suggested Timelines for Completion
4	**PS 4: Community Health, Safety and Security**					
4.1	Conduct a detailed QRA for the Project based on actual design and formulate an project site specific emergency response plan.	S. No. 4.2	N/A	CMC - NWPGCL	Quantitative Risk Assessment and Emergency Response Plan	Implemented
4.2	Develop a traffic management and logistics plan taking into consideration community safety	S. No. 3.4, 3.5	N/A	EPC Contractor	Traffic management plan.	Implemented
4.3	Undertake specific communication on health hazards and mitigation measures on an ongoing basis against new activities and associated health and safety risks to the local community.	S. No. 4.4	High	EPC Contractor, NWPGCL	Communication on health hazards and mitigation Measures.	Within 3 months of COD
4.4	Ensure any future security arrangements shall comply with PS4 requirements. The NWPGCL Grievance Mechanism should include security within its scope.	S. No. 4.5	Medium	NWPGCL	Compliance check against PS4 requirement.	3 months of COD

ANNEX A: PHOTO DOCUMENTATION

	
Meeting with EPC and NWPGCL	Meeting with NWPGCL
	
Demolished NDE worker Sheet and office area	Merely unused bathing area at labour shed

	
Active sheet inside facility	Waste management
	
Complained box displayed at NDE off site	Complained box displayed at CMC off site

	
Inspection of NEPC medical facilities	Storage of Hazardous materials
	
Inspection of hazard materials store area	Kitchen facilities of labor shed

	
Worker without proper PPE (hand gloves)	Water spreading at the project site

ANNEX B: NOTICE OF CONTRACTOR'S DEFAULT

Date: 16/01/2018

The Contractor,
National Development Engineers Ltd.
House # 20A, Road # 44, Gulshan-02, Dhaka-1212

Attention: Md. Rezaul Karim
General Manager
Sirajganj 225MW Combined Cycle Power Plant Project, Unit-02

Contract Name: Civil Work of different Structures for Sirajganj 225MW Combined Cycle Power Plant Project, Bangladesh.
Contract No. : SIRAJ225MW/UNIT2/C002

Notice of Contractor's Default

Your company has committed the following Contractor's Default(s) under the above Contract, as defined in clause 11(VII) of the Liability of Contract:

- The Second party (NDE) shall carry out the works in a safe manner with due regard for the safety of site operation/activities and pay due regard to the environmental protection in accordance with relevant local authorised laws and regulations as health, safety and Environment.

  In the event that the second party failed to fulfil the obligation regard to the environmental protection, site security, workmen health protection, the second party shall be liable to pay the compensation all expense accordingly.

It is observed that there is no Doctor recruited on the site for workmen health protection, which is a direct violation of the above clause. We have reminded this issue many times to your concern person by verbally and officially, but unfortunately no good result is coming out of your site. These force us to issue this letter to you.

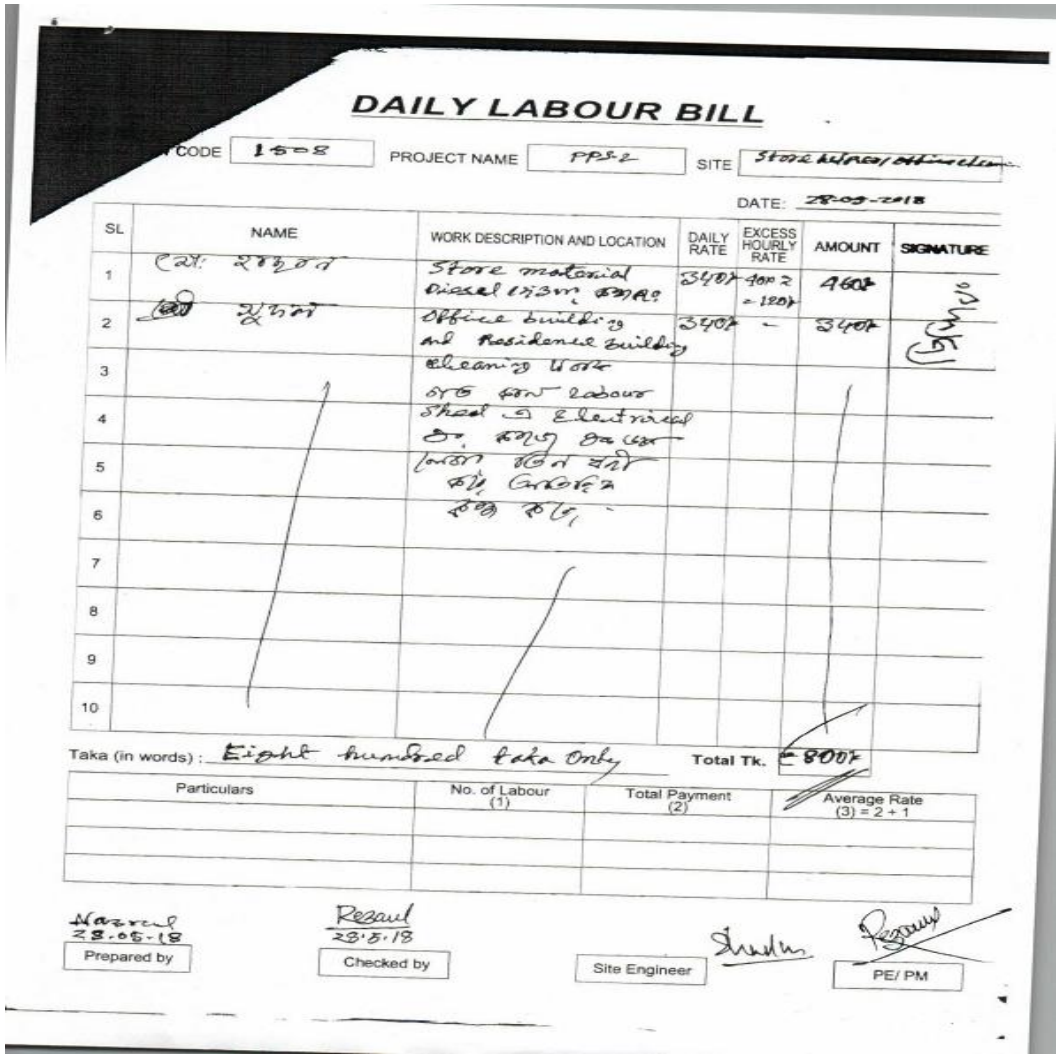
Please respond to this notice within 7 days, either by providing clear evidence that you have remedied the identified Contractor's Default(s) or by proposing reasonable steps to do so.

Yours sincerely,

王翔宇

Wang Xiangyu
CMC Sirajganj Site Office

ANNEX C : SAMPLE DAILY LABOUR BILL



DAILY LABOUR BILL

CODE 1508 PROJECT NAME PPS-2 SITE Store MPRG/ Office clean...

DATE: 28-05-2018

SL	NAME	WORK DESCRIPTION AND LOCATION	DAILY RATE	EXCESS HOURLY RATE	AMOUNT	SIGNATURE
1	[illegible]	Store material Diesel [illegible]	340/-	40/- × 2 = 120/-	460/-	
2	[illegible]	Office building and Residence building	340/-	-	340/-	
3		Cleaning work				
4		Shed & Electrical				
5		[illegible]				
6						
7						
8						
9						
10						

Taka (in words): Eight hundred taka Only Total Tk. 800/-

Particulars	No. of Labour (1)	Total Payment (2)	Average Rate (3) = 2 ÷ 1

Nazrul 28.05.18
Prepared by

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