



Environment and Social Monitoring Report

Annual Environment and Social Monitoring Report
Project Number: 44951-014
December 2018

BAN: Bibiyana II Gas Power Project

Prepared by Summit Bibiyana II Power Company Limited for Asian Development Bank

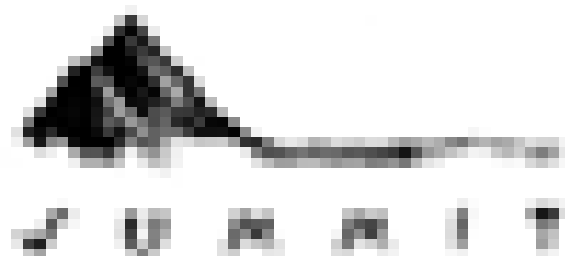
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Asian Development Bank

ANNUAL ENVIRONMENTAL & SOCIAL MONITORING REPORT-2018

(January to December)



SUMMIT BIBIYANA POWER COMPANY LIMITED

341 MW GAS FIRED COMBINED CYCLE POWER PLANT
Parkul, Nabiganj, Habiganj, Sylhet



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1.0 Project Status

1.1 Project Description:

Summit Bibiyana Power Company Limited (SBPCL) (the “Company”) has implemented a Gas fired combined cycle power plant located at Parkul, Nabigonj, Hobigonj in Bangladesh and it has been providing electricity to BPDB since the Commercial Operation Date on the 28th December 2018. The Project has envisaged one gas turbine generator of GE, one heat recovery steam generator of Huangzhou Boiler and one steam turbine generator from Harbin. The plant’s net capacity under the PPA definition is 341 MW on combined cycle operation and 222 MW on Simple Cycle Operation at reference site conditions.

SBPCL was selected by BPDB to set up the Project based on international competitive bidding process (ICBC). SBPCL had been incorporated in Bangladesh for implementing this Project and accordingly entered into an Implementation Agreement (IA) with Government of Bangladesh and Power Grid Company of Bangladesh. Land Lease Agreement (LLA) for 11 acres land had been signed with BPDB for setting up the Project. Power Purchase Agreement (PPA) had been signed with BPDB for sale of power from the Project to BPDB. Gas Supply Agreement (GSA) had been executed with Jalalabad Gas Transmission and Distribution Company Limited. The Project was executed by SBPCL through an EPC contract awarded to a consortium of NEPC and CEEC. Operation and Maintenance of the Plant had been awarded to China Northeast Electric Power Engineering & Service Co. Ltd (NEPCS).

1.2 Milestone Record:

Execution of IA, PPA, GSA, LLA	:	12th May, 2011
Back feed power taken from 400 kV switchyard	:	8th March, 2015
Gas availability ensured	:	15th April, 2015
GT First Firing Date	:	27th April, 2015
GT First Synchronize to Grid	:	29th April, 2015
ST First Synchronize to Grid	:	2nd December, 2015
SC Commercial Operation Date	:	06th June, 2015
CC Commercial Operation Date	:	28th December, 2015

1.3 Contact Informations

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2.0 Description of the Environmental Management System

The Company we are submitting Environmental Monitoring Report and Environmental Performance Report to DoE (Department of Environment) on monthly basis. The report contains, among others, the data on Emissions Quality Monitoring, Noise Emissions, Solid and Other Waste Discharge, Wastewater Report, Ambient Air Quality Monitoring, river water quality, GHG emission data etc. The Company has got the certificate on Management system standard of ISO 14001:2004, OSHA 18001:2007 & ISO 9001:2008. Certificate of ISO 9001:2008, ISO 14001:2004 and OSHA 18001:2007 are given in the **Annex 1, Annex 2 & Annex 3** respectively. Date of Issuing of these certificates is 20.12.2017 and validity is 19.12.2020.

2.1 Policy & Procedures

The Company's O&M team, NEPCS follow the EHS policy and procedures that are approved by the board of Director of Summit Bibiyana Power Company Limited. This policy are reviewed and revised as per policy time to time or whenever required to comply with the recognized standard for achieving the excellence. Total 13 procedures are approved in EHS category and those are mentioned below:

1. SBPCL- P-EHS-001-01 EHS policy
2. SBPCL- P-EHS-001-02 Permit to Work
3. SBPCL- P-EHS-001-03 Caustic & Acid Handling Procedure (Revision B)
4. SBPCL- P-EHS-001-04 Hazardous chemicals Handling Procedure(Revision B)
5. SBPCL- P-EHS-001-05 Emergency Preparedness and Response Plan
6. SBPCL- P-EHS-001-06 Electrical Safety Program (Revision B)
7. SBPCL- P-EHS-001-07 Environmental and Social Management and Monitoring Plan
8. SBPCL- P-EHS-001-08 Spill Prevention & Response Plan
9. SBPCL- P-EHS-001-09 Spill & Release Reporting procedure
10. SBPCL- P-EHS-001-10 Waste management procedure SBPCL- EHS -011 Community Development Procedure.
11. SBPCL- P-EHS-001-11 Community Development Procedure
12. SBPCL- P-EHS-001-12 Grievance Redress Mechanism Procedure
13. SBPCL- P-EHS-001-13 Incident Investigation and Reporting

The policies developed by the Company take care of the foremost account of the health and safety of their employees and other persons, and preservation of the environment. The Company adheres to the highest standards for the safe operation of the plant and protection of the employees, visitors, contractors, suppliers, contract workers, customers, citizens of the community and the environment.

Inherent in our approach is the commitment to raise awareness of the potential effects of operations of power plant on the health, safety and environment and to ensure that all the people concerned are fully aware of these issues and contribute to their resolution and in instilling responsibility as an intrinsic feature of all its practices and procedures.



We are committed to maintain safe and healthy working conditions to prevent any injury and ill health, protection of the environment, equipment and systems of work for all of us including our neighbors', and to provide such information, training, supervision, and allocation of resource as we need for this purpose. We also accept our responsibility for the health and safety of other people who may be affected by our activities along with the environment around us.

These aims will be achieved by:

- Complying with applicable local laws, regulations and standards. In absence of appropriate legislation, requirements of corporate and similar industrial good practice, where reasonably pertinent, will be applied;
- Communicating openly with employees, contractors, visitors and affected parties to promote a system of enhanced health, safety and environment;
- Following a process of risk and impact management that will continuously reduce the health and safety risks and protect the environment associated with the company's business activities;
- Monitoring, on a regular basis, the health and safety effects of its activities on employees, and affected parties in the work environment with the view of improving the systems;
- Strive to seek opportunities to minimize and/or prevent pollution through the implementation of cost-effective new technology and the optimization of existing systems. Ensure safe treatment and disposal of waste.
- Implementing health, safety and environment management systems based on ISO and OSHAS standards;
- Setting and reviewing of OH&S and environmental objectives and targets, continual improvement and compliance with this policy will be monitored through a process of internal and external auditing and management review.
- Quarterly Environmental report was submitted to department of environment as per condition given in environment clearance certificate.



2.2 Organizational Structure

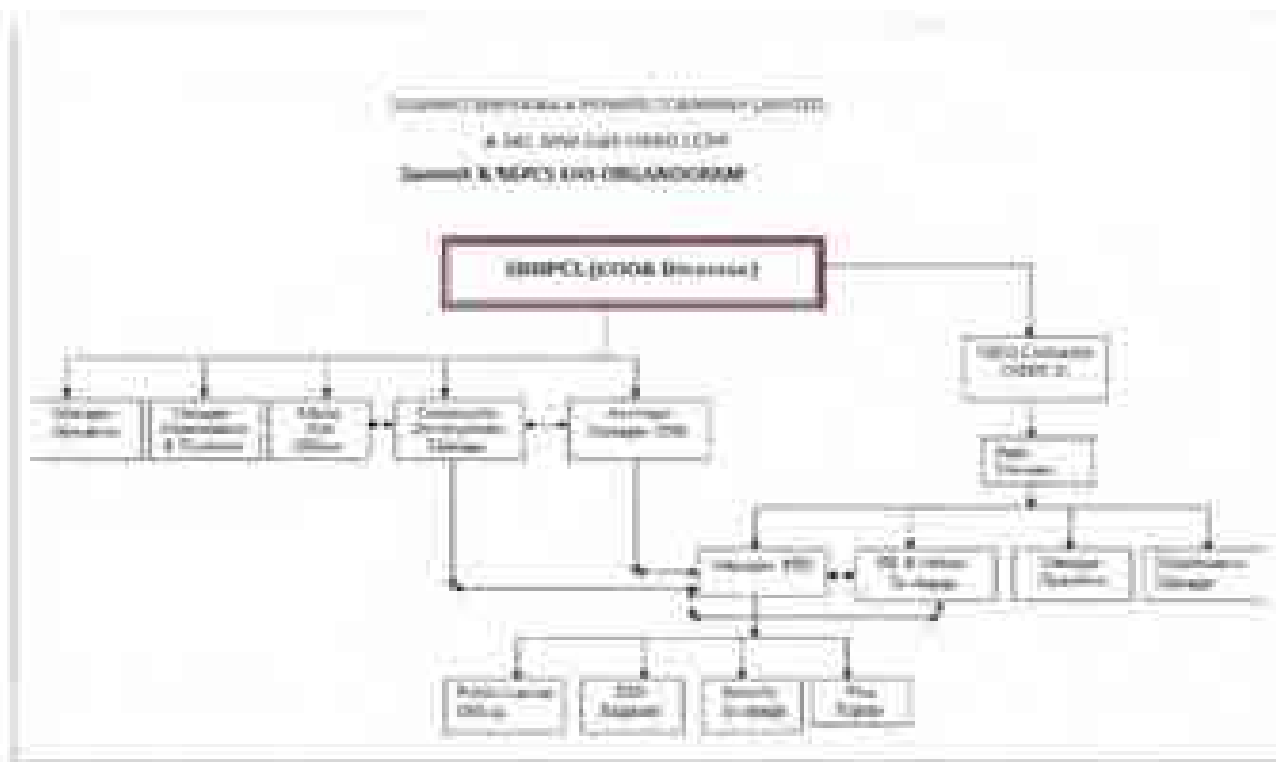
SBPCL has developed an organizational structure with well-defined roles, responsibilities and authorities. SBPCL has employed a qualified Asst. EHS Manager who reports to the COO, Summit Turbine division. O&M contractor site have EHS Manager and EHS Engineer as well. One EHS committee is functional in the Plant. They do the monthly meeting to address all EHS issues and findings.

EHS Committee Members

EHS Committee will be headed by Plant Manager, Summit Bibiyana Power Company Limited and others members are as follows:

- The Plant Manager (President)
- Manager-Operation Summit (Member)
- Manager-Maintenance & Contracts, Summit Member)
- Assistant Manager, Social & Community Relations-SCR (Member)
- Asst. Manager-EHS, Summit (Member)
- Manager-EHS, NEPCS (Member)
- Maintenance Manager, NEPCS (Member)
- Operation Manager, NEPCS (Member)
- Shift charge Engineers, NEPCS (Member)
- Senior Engineer Mechanical (Member)
- Senior Engineer I&C (Member)
- Senior Engineer Electrical. (Member)
- Community liaison Officer (Member)
- Admin officer, Summit (Member)
- Admin In-charge, NEPCS
- Admin officer, NEPCS
- Admin officer, Summit (Member)

At the level of Summit Corporation limited, there is a dedicated team with rules and responsibility to protect environment and uphold safety issues. At the plant level, SBPCL have its own EHS team. NEPCS is the O & M contractor for SBPCL. They have their own EHS team. Organogram of Summit and NEPCS is given below:



We will continue to review our reporting not only from a timeline standpoint but also from a compliance and quality standpoint. We will continue to comply with all local laws and regulations and all corporate guidelines.

SBPCL is maintaining the term and conditions which are given at environmental clearance certificated.

To date, the project company has not received any formal complaints or claims from neighbors of the project site or any other stakeholders concerning our environmental performance.



2.5 Project Operational Statistics:

Month	Gross Generation	Energy Export	Energy Import	Net Energy Export	Aux Consumption	Availability Factor	Plant Capacity Factor	Gas Consumption	PPA Heat Rate	Plant Heat Rate	
	(MWh)	(MWh)	(MWh)	(MWh)	(MWh)	(%)	(%)	(MMSCF)	(KJ/KWh)	(KJ/KWh)	
January	202645.0	197154.0	299.0	196855.0	5790.0	89.1	77.60	1341.12	7804.0	7577.0	
February	197074.0	191669.0	158.0	191511.0	5563.0	93.8	83.60	1299.6	7778.0	7540.0	
March	203477.0	197700.0	334.388	197365.6	6111.4	87.3	77.80	1339.4	7768.0	7546.0	
April	221647.0	215337.0	43.38	215293.6	6353.4	98.8	87.68	1449.7	7755.0	7489.0	
May	202230.0	196448.0	309.89	196138.4	6091.6	85.9	77.31	1325.67	7745.0	7528.0	
June	221830.5	215524.4	122.4	215402.0	6428.5	100.0	87.70	1447.8	7715.0	7474.0	
July	239763.0	233052.0	0.0	233052.0	6711.0	100.0	91.86	1562.2	7698.0	7454.0	
August	220010.8	213763.8	190.8	213573.0	6437.8	93.2	84.20	1445.8	7727.0	7528.0	
September	227762.0	221311.0	0	221311.0	6451.0	100.0	90.14	1492.0	7724.0	7497.0	
October	210977.0	205028.0	249	204779	6198.0	89.4	80.7	1391.0	7745.0	7550.0	
November	194565.0	189076.0	285	188791	5774	85.65	76.89	1286.5	7770.0	7578.0	
December	42336.0	41170	902	40267	2069	17.8	15.87	291	7958.0	8039.0	



2.6 Project Environment, Health and Safety Statistics

Health and Safety Statistics (*From 1st January to December'2018*)

Description	Employee	Contractor
	YTD	YTD
Fatality	0	0
First Aid Cases	0	0
Near Miss	0	0
Days without LTA Since SCCOD	1305 (up to Dec'18)	

Environment (*From 1st January to December'2018*)

Description	Year To Date
No of accident (air/effluent/spill)	Nil
Quantity of NOx Emission, Tons	157.958
Calculated CO2 Emission, Tons	817472.02
Quantity of effluent, M3	85266
Quantity of oily cloth (kg)	0
Quantity of used oil filter (pcs)	0
Quantity of sludge, kg	13550
Quantity of used oil, (Kg)	175
Generation of medical waste, kg	0.13

3.0 EHS Training

A yearly EHS training calendar was prepared by SBPCL in consultation with NEPCS, O&M Contractor. This training calendar is scheduled on monthly Basis. All visitor and new employee of Summit and O&M must attend the safety induction. They are also getting job specifics training before start jobs.

Training Records-2018 where List of topics, hours of training and number of participants are available is given in **Annex 04**.

Each year this schedule is reviewed and required changes are adopted for continual improvement.



TRAINING FOR SECURITY PERSONNEL'S- 2018:



COMMITMENTS TO EHS: MONTHLY EHS & TECHNICAL TRAINING-2018





First Aid, Search & Rescue Training-2018:



Training modules, total number of persons attended in the training, number of training hours are given in the **Annex 4**.



4.0 Environmental Management & Procedures

4.1 Ambient parameters and record

EHS department is responsible for monitoring of the overall environmental performance of different items like stack emission quality, ambient air quality, liquid effluent, noise, solid waste, GHG Emission data, river water temperature and calibration records of AAQMS etc. The plant has developed waste management procedure for proper disposal of different type of wastes. SBPCL has made an agreement with DoE approved vendor for disposing of different types of wastes in an environment-friendly way.

There are three stations to monitor the Ambient Air quality every month. Records of Monitoring are given below:

<i>Sample Frequency (e.g. quarterly)</i>	<i>Ambient Air Quality Parameter</i>	<i>World Bank Group/IFC Maximum Levels</i>	<i>Host Country Regulatory Maximum Levels</i>	<i>SBPCL Annual average</i>
Monitoring Location: - Station-1				
	Particulate Matter (PM ₁₀)	75 µg/m ³	65 µg/m ³	42.996 µg/m ³
	Particulate Matter (PM _{2.5})	150 µg/m ³	150 µg/m ³	38.573 µg/m ³
	SOx	125 µg/m ³	365 µg/m ³	47.800 µg/m ³
	NOx	200 µg/m ³	100 µg/m ³	14.653 µg/m ³
	CO	NF	10000 µg/m ³	743.020 µg/m ³
Monitoring Location: - Station-2				
	Particulate Matter (PM ₁₀)	75 µg/m ³	65 µg/m ³	53.094 µg/m ³
	Particulate Matter (PM _{2.5})	150 µg/m ³	150 µg/m ³	32.837 µg/m ³
	SOx	125 µg/m ³	365 µg/m ³	15.328 µg/m ³
	NOx	200 µg/m ³	100 µg/m ³	10.477 µg/m ³
	CO	NF	10000 µg/m ³	796.466 µg/m ³
Monitoring Location: - Station-3				
	Particulate Matter (PM ₁₀)	75 µg/m ³	65 µg/m ³	47.994 µg/m ³
	Particulate Matter (PM _{2.5})	150 µg/m ³	150 µg/m ³	44.653 µg/m ³
	SOx	125 µg/m ³	365 µg/m ³	9.533 µg/m ³
	NOx	200 µg/m ³	100 µg/m ³	15.319 µg/m ³
	CO	NF	10000 µg/m ³	332.910 µg/m ³

Locations of Ambient Air Quality Monitoring Stations are given in **Annex 13**. The calibration reports of our three AQMS(s) are in **Annex 16**.



4.2 Single point Air Emission Quality Monitoring

CEMS (Continuous Emission Monitoring system) has been installed in the Main and by-pass stack of HRSG. Online measuring data is always available. The emission value specified by the Department Of Environment and international agency to which the plant complies with is given below:

Compliance Parameter	Gas Turbine Emission Limit Value		SBPCL Result
	BANGLADESH	World bank/IFC	
SO ₂	N/A	N/A	3.96 (mg/Nm ³) *
NO _x	75 (mg/Nm ³)	51 (mg/Nm ³)	9.01 (mg/Nm ³)
SPM	150 (mg/Nm ³)	50 (mg/Nm ³)	1.57 (mg/Nm ³) **

* The Company will further check and verify the data. However, SO₂ emission monitoring done by a third party (Bureau Veritas has shown the result to be 0.01 mg/Nm³ (Annex 20)

**PM₁₀ in stack emission is not measured by our CEMS, only SPM is measured.

4.3 Liquid Effluent Discharge and Storm water management:

In plant prior every discharge, pH, temperature, Total Suspended Solid, Total Dissolved Solid, Biological Oxygen Demand, Chemical Oxygen Demand, Iron, residual Chlorine, Turbidity and Electro-conductivity are measured, and average result of that discharge is documented in weekly basis.

Sample Frequency (e.g. Quarterly)	Required Laboratory Analysis for Collected Samples	World Bank Group/IFC Maximum Levels	Host Country Regulatory Maximum Levels	SBPCL Annual average
Weekly and Yearly	pH	6.0-9.0	6.0-9.0	8.16
Weekly and Yearly	Conductivity	-	1200 µS/cm	485.14
Weekly and Yearly	Temperature	**	40°C	26.16
Weekly and Yearly	Residual Chlorine	0.2	0.2 ppm	0.15
Weekly and Yearly	TSS	50	150 mg/l	9.94
Weekly and Yearly	TDS	-	2100 mg/l	318.02
Weekly and Yearly	BOD	-	50 mg/l	5.82
Weekly and Yearly	COD	-	200 mg/l	43.57
Weekly and Yearly	Fe	1	2 mg/l	0.82
Weekly	Turbidity	-	-	11.92

** •Site specific requirement to be established by the EA.

** •Elevated temperature areas due to discharge of once-through cooling water (e.g., 1 Celsius above, 2 Celsius above, 3 Celsius above ambient water temperature) should be minimized by adjusting intake and outfall design through the project specific EA depending on the sensitive aquatic ecosystems around the discharge point.



All the effluent parameters stated in the Environmental Conservation Rules 1997 like Chromium (as Hexavalent), Dissolved Oxygen, Chloride, Cadmium, Chromium as total, Copper, Fluoride, Sulfide, Nitrogen (Kjeldahl-N), Lead, Mercury, Nickel, Zinc, Cyanides, Ammoniacal Nitrogen, Ammonia (as free ammonia), Nitrate as N, Phenolic compound, Dissolve Phosphorous, Selenium, Boron, Manganese, Arsenic, Oil and grease annually. Test report are given in the **Annex 09**.

To discharge the stormwater properly, SBPCL has a well sloped drainage system. To maintain the whole system functioning, drain cleaning is done on weekly basis.

The Temperature Monitoring data is attached in Annex 21.

4.4 Noise parameter Record:

Average Monthly Noise sampling records of SBPCL are given below for 8 sampling locations at the boundary side of the plant premises:

Sample Frequency (e.g. quarterly)	Ambient Noise Parameters	World Bank Group/IFC Maximum Levels	Host Country Regulatory Maximum Levels	SBPCL Annual average
Monitoring Location:- North Side Boundary-2 (Near CT Pump House)				
Monthly	Industrial, commercial receptors Daytime	L_{eq} (hourly), 70 dB(A)	75 dB(A)	66.4 dB(A)
Monthly	Industrial, commercial receptors, Nighttime	L_{eq} (hourly), 70 dB(A)	70 dB(A)	62.3 dB(A)
Monitoring Location:- North Side Boundary-1 (Near CT)				
Monthly	Industrial, commercial receptors Daytime	L_{eq} (hourly), 70 dB(A)	75 dB(A)	66.6 dB(A)
Monthly	Industrial, commercial receptors, Nighttime	L_{eq} (hourly), 70 dB(A)	70 dB(A)	61.4 dB(A)
Monitoring Location:- East Side Boundary-1 (Near Clarifier)				
Monthly	Industrial, commercial receptors Daytime	L_{eq} (hourly), 70 dB(A)	75 dB(A)	65.0 dB(A)
Monthly	Industrial, commercial receptors, Nighttime	L_{eq} (hourly), 70 dB(A)	70 dB(A)	61.1 dB(A)
Monitoring Location:- East Side Boundary-2 (Near living area)				
Monthly	Industrial, commercial receptors Daytime	L_{eq} (hourly), 70 dB(A)	75 dB(A)	62.7 dB(A)



Sample Frequency (e.g. quarterly)	Ambient Noise Parameters	World Bank Group/IFC Maximum Levels	Host Country Regulatory Maximum Levels	SBPCL Annual average
Monthly	Industrial, commercial receptors, Nighttime	L_{eq} (hourly), 70 dB(A)	70 dB(A)	59.6 dB(A)
South Side Boundary-1 (Near gas station)				
Monthly	Industrial, commercial receptors Daytime	L_{eq} (hourly), 70 dB(A)	75 dB(A)	68 dB(A)
Monthly	Industrial, commercial receptors, Nighttime	L_{eq} (hourly), 70 dB(A)	70 dB(A)	60.2 dB(A)
South Side Boundary-2 (Near GT turbine building)				
Monthly	Industrial, commercial receptors Daytime	L_{eq} (hourly), 70 dB(A)	75 dB(A)	69.2 dB(A)
Monthly	Industrial, commercial receptors, Nighttime	L_{eq} (hourly), 70 dB(A)	70 dB(A)	62.3 dB(A)
West Side Boundary-1 (Near transformer)				
Monthly	Industrial, commercial receptors Daytime	L_{eq} (hourly), 70 dB(A)	75 dB(A)	65 dB(A)
Monthly	Industrial, commercial receptors, Nighttime	L_{eq} (hourly), 70 dB(A)	70 dB(A)	61.3 dB(A)
West Side Boundary-2 (Near H2 plant)				
Monthly	Industrial, commercial receptors Daytime	L_{eq} (hourly), 70 dB(A)	75 dB(A)	63 dB(A)
Monthly	Industrial, commercial receptors, Nighttime	L_{eq} (hourly), 70 dB(A)	70 dB(A)	57.8 dB(A)
Monitoring Location:- East site (Parkul village)				
Monthly	Residential, institutional, educational receptors, Daytime	L_{eq} (hourly), 55 dB(A)	60 dB(A)	53.27 dB(A)
Monthly	Residential, institutional, educational receptors, Nighttime	L_{eq} (hourly), 45 dB(A)	50 dB(A)	47.41 dB(A)
Monitoring Location:- West side (Bongaon village)				
Monthly	Residential, institutional, educational receptors, Daytime	L_{eq} (hourly), 55 dB(A)	60 dB(A)	52.12 dB(A)



Sample Frequency (e.g. quarterly)	Ambient Noise Parameters	World Bank Group/IFC Maximum Levels	Host Country Regulatory Maximum Levels	SBPCL Annual average
Monthly	Residential, institutional, educational receptors, Nighttime	L_{eq} (hourly), 45 dB(A)	50 dB(A)	46.51 dB(A)
Monitoring Location:-South side (Paharpur village)				
Monthly	Residential, institutional, educational receptors, Daytime	L_{eq} (hourly), 55 dB(A)	60 dB(A)	51.62 dB(A)
Monthly	Residential, institutional, educational receptors, Nighttime	L_{eq} (hourly), 45 dB(A)	50 dB(A)	45.78 dB(A)

Note: Noise Sample was collected on hourly basis. Model of our calibrated Sound Level Meter is TES 1351B, IEC 61672-1 Class 2, CE. Day time and Night time for noise monitoring of Host Country is 06:00-21:00 hours and 21:00-06:00 hours. Day time and Nighttime for Noise monitoring acc. to the IFC Guidelines is 07:00-22:00 hours and 22:00-07:00 hours. Nighttime Noise at the Village area is slightly higher than that of IFC nighttime limit, but under the host country's nighttime limit. The reason behind this may be attributed to the increased worker's influx and insects' screaming. On the Other hand, two of the BPDB (GoB) Projects around SBPCL could add to noise - one under operation and the other is construction phase.

Noise monitoring photos and noise test results by the Third Party are given in **Annex 14 and Annex 19** respectively.

4.5 Greenhouse Gases Emission Records:

The Company has calculated total CO₂ (GHG) emitted based on the consumed Natural Gas. Total CO₂ Emissions generated by the plant in the year 2018 is 817,472 Ton.

4.6 Waste Generation and Disposal Records

SBPCL has developed waste management procedure under procedure number SBPCL-EHS-010. It has made an agreement with a DoE approved Contractor for disposing off different category of wastes in an environmentally sound way. The record was maintained in monthly waste generation and disposal report.

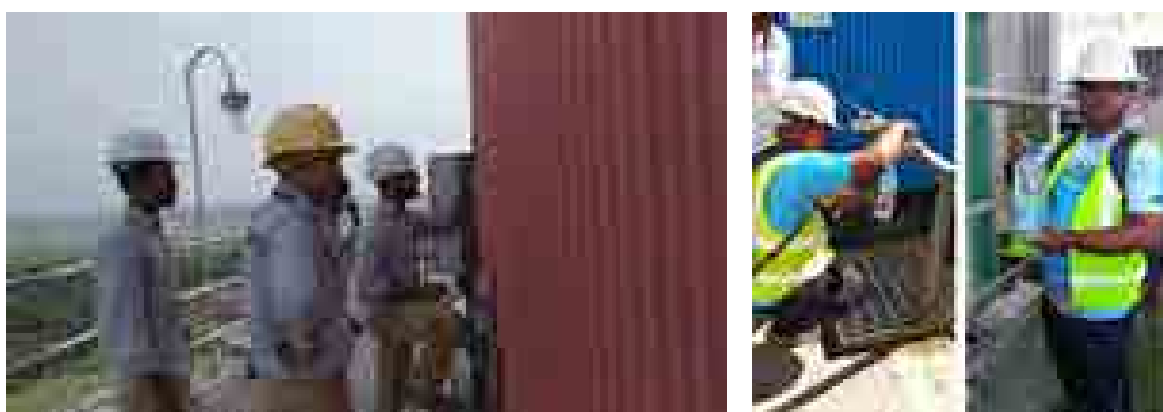
We consistently maintain our communication with our employees and O&M Contractor's employees to minimize the wastes and throw the wastes in designated bins. A third party Contractor engaged by the O&M Contractor collects all wastes from the designated area and dispose them at some designated areas as per DOE rules. The employees throw their daily wastes into the waste bins titled as recyclable bin, non-recyclable bin and hazardous waste bin. These solid wastes are collected and disposed by our DOE approved vendor named Rima Enterprise. The Company prepares and maintains annual audit report of solid waste disposal. Annual Solid Waste Management Report is attached in the **Annex 17**.



4.7 Various Inspection & Test:

- Ambient Air Test Report (**Annex 05**)
- Ground Water Quality Analysis (**Annex 06**)
- River Water Quality Analysis (**Annex 07**)
- Sludge Quality Analysis (**Annex 08**)
- Wastewater quality test (**Annex 09**)
- Noise Monitoring Photos (**Annex 14**)
- Noise Monitoring results (**Annex 19**)
- Stack Emission results (**Annex 20**)
- River Water Temperature Monitoring Records (**Annex 21**)

4.8 Various Third-Party Inspection & Test:



5.0 Management of EHS practice and monitoring

5.1 EHS Work Practice

SBPCL is regularly monitoring overall site condition such as housekeeping, misuse of water, hot work, Confined space work & work at height. PPE are being strictly maintained inside the plant. PPE zone has been declared inside the plant. Plant security personnel checked vehicles fitness conditions and others as per the safety checklist given by EHS dept. In the plant outfall area, designated security guard has been deployed with one hand mike to warn surrounding peoples. SBPCL also conducted EHS committee meeting with all departmental head regarding EHS issues in regular basis. ERP meeting also conducted as per the schedule. Safety briefing was given to housekeeping contractor to improve housekeeping at the site. Summary of the meeting minutes are furnished in the **Annex 15**.

5.2 Hot work and Confined Space work system:

In the site all hot work and confined space work are done through permit to work system. Before performing hot work and confined space work, Summit O&M team take all precautionary measure such as barricading hot work area, keeping fire extinguishers near at hot work area, removing all combustible and flammable types 'materials from hot work area

5.3 Induction training for contractor labors



All contractors and subcontractors are trained by SBPCL EHS personnel before going to their job. Every 6-month interval refresher training also conducted those subcontractors' labors. EHS personnel briefly describe about Plant site safety rules and practice.

5.4 Illumination Monitoring Summary

Illumination monitoring was done by NEPCS team on the March 2018 and records are given in the **Annex 18**.

6.0 Emergency Preparedness

6.1 Mock Drill Practices

SBPCL has developed a well-defined emergency response procedure focusing on the many emergency issues such as Natural gas leakage, Chemical Spillage, Traffic accident, terror attacks, and Hydrogen generation station fire drill, hazardous material release, earthquake response. All assembly points have been marked and sign boards have been provided at appropriate places on the site. A yearly emergency mock drill schedule was developed maintained. As per the Mock drill calendar, all drills were conducted successfully. A joint fire drill with a collaboration of local fire defense authority was conducted in April 04, 2018 and October 11, 2018. All reports are attached for reference.





Details of Drill Calendar 2018, Emergency Response Drills and Emergency Firefighting Drills are given in the **Annex 10, Annex 11, & Annex 12** Respectively.



7.0 Livelihood Restoration Program (LRP)

LRP was undertaken by SBPCL in 2015 as a mitigation measure to compensate the livelihood damage caused by the project due to land acquisition and requisition and loss of other household asset. The objective of LRP was to restore the livelihood of PAHs. The LRP was implemented between the years of 2016 – 17.

LRP was implemented by a partner NGO during the period 2016 – 2017. The project closely supervised and monitored the implementation. The LRP entitlements were Seed capital and IGA training supported by awareness raising and post training business counseling and market linkage. The seed capital was delivered to PAHs of land owner, share cropper and Khas land cultivator category as per LRF. With special consideration the resettled HHs was also delivered seed capital. The IGA training was given to 373 adult members of PAH including 98 women selected under LRP. All of them completed training and run their enterprises successfully.

After completion of LRP in 2017 SBPCL has decided to undertake a completion audit of the livelihood restoration activities implemented under LRP. For this purpose the company has engaged an independent consultant to undertake the audit. The purpose of the audit is to assess whether the implementation of activities took place as per standards and output produced and impacts created as outlined in LRP and LRF and recommend corrective measure for gaps identified.

Respective consultant has started the audit in December'2018 through précised questionnaires on household survey and FGDs. The LRP completion audit report is already prepared and submitted by the consultant. The company has shared the report with lenders On 5th April 2019. The details of LRP completion and audit are stated in the particular report.

The project met all copliance to assess livleihood damage, made mitigation pain and implemented it as per standard in respect to entitlement delivery for loss of land, asset, employemt and income and resettlement of phiscally and economically dispaced PAHs. As a result livelihood of PAHs has restored successfully.

8.0 Status of Back wage payment

The Back wage issue arose when certain number of workers didn't receive the minimum wage payment for certain period of time during construction phase of the power plant. In order to address the issue, a comprehensive list of workers (934) was prepared by the EPC contractor. The list was delivered to SBPCL after calculation of the amount for settlement of the back-wages of the listed workers.

The Back wages payment process started in November 2016 and continued till December 2018. The Company shared with the Financiers from time to time the reports depicting the settlement status of the back wages payment.



A total of 763 workers are paid among 934 listed workers. A total amount of BDT 1,42,53,848 has been paid off in two phases as the back wages payment. The remaining 171 workers have not responded and are not traceable.

Having not received no more claimants, the Company concludes that the back wages payment issue is resolved according to the agreement with the financiers. A completion report has prepared by the company and shared with the financiers in February'2019.

9.0 Community Development Program

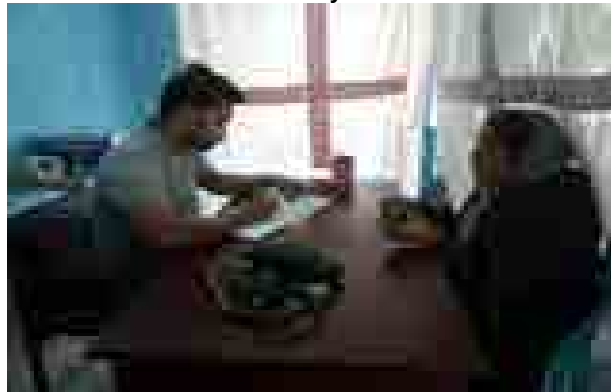
As a part of community development program, SBPCL has rented a separate place at Parkul Village adjacent to the power plant where a qualified doctor provides free medical consultancy and health checkups for the community people. This project is sponsored by SBPCL. As well as the company has arranged the facility to provide vulnerable group pension in the locality for 34 vulnerable people. The details of ongoing CDP programs are given below,

SL	Name of Activities	Total Targets	Implementing process	Type of stakeholders	timeline	Name of NGO (if any)
1.	Pension for vulnerable group of people.	34	SBPCL has selected 34 vulnerable people who are above or on the age of 65 are getting an allowance of TK 1000 for each. Initially the number was 36. Two of them have died. Replacement for this two individuals have proposed by CDP consultant. The inclusion of two new replacement for vulnerable group pension is under process.	Local community peoples	ongoing	NA
2	Enhance Health Service in existing centre	1	SBPCL bears all the expenses for Doctors and technical staff, medicine supply in the existing Centre for 5 years. There is a doctor for three days of a week. There is a community clinic run by the government	Local community peoples & Doctor	ongoing	SEBA



			nearby the SBPCL clinic. But the government clinic doesn't have any doctor for the patient, so most of the times patient from government clinic are referred to SBPCL clinic for specialized consultation. As well as Government clinic sometimes complements with some medicines for the patient.			
3	Monitoring and evaluation of CDP	13	Individual Consultant will monitor the regular implementation of community development programs by the company and identify the gaps in implementation.	Local community peoples	ongoing	Individual Consultant, Mr. AKM Shahjahan.

Doctors Medical Consultancy



Distribution of vulnerable group pension



Apart from health services, few other community development programs are under progress at SBPCL. Major initiatives that will be taken by SBPCL for the development of the local community within the reporting period are as follows.



SI	Category of Expenditure	Description of work	Location	Remarks	Budget
01	Enhancement of Local Education	Enhance construction of new building (with toilet and drinking water facilities) Regarding construction work, quotations from potential consultants have been collected for civil and architectural design and estimation.	Location School	SBIPCL with the assistance of an NGO	10,000,000
02	Establishment of a library	Establish library, furniture, bookshelf, new books	Location School	SBIPCL with the assistance of an NGO	3,000,000
03	Establishment of a local hospital	Civil structure, bed and additional running costs, medical equipment, lab	Existing hospital	SBIPCL with the assistance of an NGO	13,500,000

8.0 Public Consultation and Participation

SBPCL has maintained the community consultation and public relation with the neighboring community in the reporting period. The consultation meetings are non-budgetary. The meetings are arranged by respective Assistant Manager-SCR in regular interval. Record of some consultation events with community and stakeholders are as follows:

Stakeholder Type	Engagement Process	Dates	Subject
Landowners	Meeting Personal Interview	Continuing from October 2015. 7/02/2018 9/03/2018 21/05/2018, 17/08/2018 25/11/2018	Follow up the livelihood restoration activities of project affected households Utilization of distributed seed money for livelihood restoration by the beneficiaries. All of them are satisfied with the training and seed capital. They mentioned that the respective iGA training and seed capital is supplementing their family income, that leads to better access to daily life expenses.
Sharecropper	Meeting Personal interview	Continuing from October 2015 7/02/2018 10/04/2018 15/7/2018 7/9/2018 5/10/2018 15/12/2018	Follow up the livelihood restoration activities of project affected households Utilization of distributed seed money for livelihood restoration by the beneficiaries
Agricultural Labors	Personal Interview, Meeting	October 2015- 10/03/2018 13/6/2018 7/09/2018	Follow up the implementation of LRP activities by the project affected households



		27/10/2018 11/12/2018	During all of the stakeholders meeting representatives from JCCR are always present there. They have informed that the IGA training and support from SBPCL has assist their family incomes. Their family income is partially raised due to LRP.
Local NGO (SEBA)	Visit Meeting	October, 2014 - Till Date Last visit to SEBA office On 03/11/2018 Weekly visit to the clinic	Regular follow up of Health Service provided by the particular NGO, Monthly 40250 taka provided to the NGO for one doctor, one paramedic, House rent and overhead cost for the NGO.
Resettlement Site	Personal Interview, FGD Meeting	7.012.2017, 16.01.2018 12.02.2018, 15.03.2018 18.04.2018, 22.05.2018 11.06.2018, 14.7.2018 17.08.2018, 5.09.2018 6.10.2018. 13.11.2018 7/12/2018,	Visit Discussion about drainage system to maintain cleanliness to prevent water logging. Follow up livelihood restoration program and changes in their daily livelihood. Drinking water problem was an issue which has been partially solved because one of local elite has donated one tubewell in particular area.
Projects surrounding Community	Interview, meeting, visit	September 2014 1/03/2018 24/07/2018 04/08/2018 15/10/2018	Community welfare, grievance, project concerns. Regarding enhancement of local primary Scholl it has been discussed the construction will start within 2019. Regarding existing health care center the community demanded a full time doctor and additional medicine and free medical test services. It has been discussed that SBPCL has plan to develop this facilities in coming years.
Vulnerable Group	Pension Distribution	2016- continuing 7/01/2018 08/02/0218 7/03/2018 7/04/2018 6/05/2018 9/06/208 5/07/2018 10/08/2018 7/09/2018 4/10/2018 9/11/2018 12/12/2018	Monthly Pension Distribution. A total of 34 vulnerable people has been identified and being provided with an amount of BDT 1000 monthly for each.



Pictures of some public consultation events of 2018:



Location: Parkul Resettlement area
Date: 20/12/2018

Location: Parkul village
Date: 07/09/2018

9.0 Grievance Redress & Management

During the reporting period, total 3 grievances were received by the Company in relation to EHS&S issues. Brief descriptions of the grievances are as follows:

Grievance/ Dispute date	Complainant	Issue	Resolved (Y/N)	Action taken	Date closed
1/3/2018	Shawkat, NEPCS-Security Guard.	Scuffle between community members and security staff	Y	There was a community agitation at gate no 2 of the facility due to confusion between community people and security guards. The confusion was, the community people thought respective police have arrested some local people for trespassing the Bibiyana-3 project and hold them inside the Summit Plant, which was not actually happened. Police arrested local people and took them to their shed near Bibiyana South project. In the process one of the community people slapped the security guard. Police (SI) was informed by SBPCL, he came to the place and resume the confusion of community people. Finally they apologized to the security guard.	Closed on 2/3/2018 and community people agreed their misunderstanding and they apologized to the security guard.
24/09/2018	Community people from Parkul, Paharpur, Bongaon	Damaged road due to construction works of	Y	During 2nd October'2018 a follow-up was made with community people and local UP representatives. They informed that Respective authority (PDB) has	2/10/2018



		Bibiyana South & Bibiyana III		communicate with Zilla Parishad representatives to repair the damaged road. As well as respective EPC contractor company of Bibiyana South SINAMM has placed some steel plate in some of the damaged part of the road.	
15/10/2018	Foyso Miah from Resettlement area	Complain on duty hours of respective doctor	Y	The respective doctor of health clinic is ment to do his visit three days in a week for three hours. But during 11, 13 and 15th October'18 the doctor didn't perform his duty for full time. Mr Foyso couldn't reach the doctor during the mentioned date and time. Against his complain communication was made with respective NGO (SEBA). They informed that during that week respective doctor had some personal reasons to leave the clinic early and he informed the respective NGO. From the very next week the scheduled time will be performed by the doctor. On 20th October on site follow up action has been taken by SBPCL personnel and it was found that respective doctor is doing his duty as prescribed time line.	20/10/2018

10.0 Conclusion

SBPCL has the commitment to raise awareness of the potential effects of the operation of power plant on the health, safety and environment. The company is totally complied with local and international E&S requirements.

Regarding LRP audit, SBPCL has already submitted the draft report to the lenders. Apart from this, for CDP implementation and monitoring, a potential consultant has been hired. Through FGDs and community consultation, the Consultant shall evaluate the extent of CDP works so far implemented and the works under implementation. The Consultant will provide recommendations and required field level assistances to achieve positive CDP outcomes at community level. Standard EHSS practices remain as the integral part of the commitment. In the reporting year of 2018, SBPCL tried to set examples of better practices within the premises in EHSS aspects while keeping aside the scopes of further improvement in the coming years.



ISO 14001





ANNEX 03
OHSAS 18001





AS 中国航空工业集团公司

Thermal Efficiency	94%
Specific Volume	18.3

	UIC
University of Illinois at Chicago	Chicago, IL

Field Manager	1
Technician	10

	TPO
	CLEARING

[illegible]

TITLE: TRAINING RECORDS									
Training Date: May 1, 2017									
Sl. No.	Date	Training Module	Number of Persons					Time	Remarks
			Male	Female	Total	Others			
24	01-05-2017	Postmaster New Salary Software			12		12	00	
25	01-05-2017	Postmaster New Salary Software			1		1	00	
26	01-05-2017	New Salary Software	2				2	00	
28	01-05-2017	Postmaster New Salary Software			1		1	00	
29	01-05-2017	Postmaster New Salary Software	01				01	00	
30	01-05-2017	Postmaster New Salary Software			1		1	00	
31	01-05-2017	Postmaster New Salary Software			1		1	00	
32	01-05-2017	Postmaster New Salary Software			1		1	00	
33	01-05-2017	Postmaster New Salary Software			1		1	00	
34	01-05-2017	Postmaster New Salary Software			1		1	00	
35	01-05-2017	Postmaster New Salary Software			1		1	00	
36	01-05-2017	Postmaster New Salary Software			1		1	00	
37	01-05-2017	Postmaster New Salary Software			1		1	00	
38	01-05-2017	Postmaster New Salary Software			1		1	00	
39	01-05-2017	Postmaster New Salary Software			1		1	00	
40	01-05-2017	Postmaster New Salary Software			1		1	00	
41	01-05-2017	Postmaster New Salary Software			1		1	00	
42	01-05-2017	Postmaster New Salary Software			1		1	00	
43	01-05-2017	Postmaster New Salary Software			1		1	00	
44	01-05-2017	Postmaster New Salary Software			1		1	00	
45	01-05-2017	Postmaster New Salary Software			1		1	00	
46	01-05-2017	Postmaster New Salary Software			1		1	00	
47	01-05-2017	Postmaster New Salary Software			1		1	00	
48	01-05-2017	Postmaster New Salary Software			1		1	00	
49	01-05-2017	Postmaster New Salary Software			1		1	00	
50	01-05-2017	Postmaster New Salary Software			1		1	00	
51	01-05-2017	Postmaster New Salary Software			1		1	00	
52	01-05-2017	Postmaster New Salary Software			1		1	00	
53	01-05-2017	Postmaster New Salary Software			1		1	00	
54	01-05-2017	Postmaster New Salary Software			1		1	00	
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62	01-05-2017	Postmaster New Salary Software			1		1	00	
63	01-05-2017	Postmaster New Salary Software			1		1	00	
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65	01-05-2017	Postmaster New Salary Software			1		1	00	
66	01-05-2017	Postmaster New Salary Software			1		1	00	
67	01-05-2017	Postmaster New Salary Software			1		1	00	
68	01-05-2017	Postmaster New Salary Software			1		1	00	
69	01-05-2017	Postmaster New Salary Software			1		1	00	
70	01-05-2017	Postmaster New Salary Software			1		1	00	
71	01-05-2017	Postmaster New Salary Software			1		1	00	
72	01-05-2017	Postmaster New Salary Software			1		1	00	
73	01-05-2017	Postmaster New Salary Software			1		1	00	
74	01-05-2017	Postmaster New Salary Software			1		1	00	
75	01-05-2017	Postmaster New Salary Software			1		1	00	</

Typical Performance:	1.5-2.0
Overall Rating:	8.5-9.0

George McGovern	1970
George McGovern	1972


2019		Number of Persons					Training Modules		Remarks
Sl	Date	Training Module	Male	Female	Others	Total	Training Modules		
21	21-08-2019	Basic Fisheries Training	48			48	34	48-112 Students	
22	21-08-2019	Work on Safety measures, Safety Rules & Regulations	14			14	140	85-112 Students	
23	20-09-2019	Submarine, Underwater, PSC and GPS Trainer	37			37	128	48-112 Students	
24	20-09-2019	Workshop on plant and soil science	32			32	144	48-112 Students	
25	20-09-2019	Sea Survival, storm survival & HSCA-boat	32			32	48	48-112 Students	
26	21-09-2019	Environmental Management	32	1		33	128	48-112 Students	
27	21-09-2019	Thermodynamics Training	32			32	128	48-112 Students	
28	20-09-2019	Workshop on plant and soil science	32			32	144	48-112 Students	
29	20-09-2019	Workshop on plant and soil science	32			32	144	48-112 Students	
30	20-09-2019	Workshop on plant and soil science	32			32	144	48-112 Students	
31	20-09-2019	Workshop on plant and soil science	32			32	144	48-112 Students	
32	20-09-2019	Workshop on plant and soil science	32			32	144	48-112 Students	
33	20-09-2019	Workshop on plant and soil science	32			32	144	48-112 Students	
34	20-09-2019	Workshop on plant and soil science	32			32	144	48-112 Students	
35	20-09-2019	Workshop on plant and soil science	32			32	144	48-112 Students	
36	20-09-2019	Workshop on plant and soil science	32			32	144	48-112 Students	
37	20-09-2019	Workshop on plant and soil science	32			32	144	48-112 Students	
38	20-09-2019	Workshop on plant and soil science	32			32	144	48-112 Students	
39	20-09-2019	Workshop on plant and soil science	32			32	144	48-112 Students	
40	20-09-2019	Workshop on plant and soil science	32			32	144	48-112 Students	
41	20-09-2019	Workshop on plant and soil science	32			32	144	48-112 Students	
42	20-09-2019	Workshop on plant and soil science	32			32	144	48-112 Students	
43	20-09-2019	Workshop on plant and soil science	32			32	144	48-112 Students	
44	20-09-2019	Workshop on plant and soil science	32			32	144	48-112 Students	
45	20-09-2019	Workshop on plant and soil science	32			32	144	48-112 Students	
46	20-09-2019	Workshop on plant and soil science	32			32	144	48-112 Students	
47	20-09-2019	Workshop on plant and soil science	32			32	144	48-112 Students	
48	20-09-2019	Workshop on plant and soil science	32			32	144	48-112 Students	
49	20-09-2019	Workshop on plant and soil science	32			32	144	48-112 Students	
50	20-09-2019	Workshop on plant and soil science	32			32	144	48-112 Students	
51	20-09-2019	Workshop on plant and soil science	32			32	144	48-112 Students	
52	20-09-2019	Workshop on plant and soil science	32			32	144	48-112 Students	
53	20-09-2019	Workshop on plant and soil science	32			32	144	48-112 Students	
54	20-09-2019	Workshop on plant and soil science	32			32	144	48-112 Students	
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57	20-09-2019	Workshop on plant and soil science	32			32	144	48-112 Students	
58	20-09-2019	Workshop on plant and soil science	32			32	144	48-112 Students	
59	20-09-2019	Workshop on plant and soil science	32			32	144	48-112 Students	
60	20-09-2019	Workshop on plant and soil science	32			32	144	48-112 Students	

20	10-09-2019	Emergency fire safety refresher	4				4	100	
21	10-09-2019	Emergency response and handling drills	30	4			34	100	
22	10-09-2019	Emergency response drills for fire alarm, manual fire alarm, fire alarm, manual fire alarm	31				31	100	100% (100%)
23	11-09-2019	First aid course in case of emergency and other emergency response (100% of course) (100%)	11				11	100	100% (100%)
24	10-09-2019	Fire safety, fire alarm and fire alarm	11				11	100	100% (100%)
25	10-09-2019	Fire safety training	11				11	100	100% (100%)
26	10-09-2019	Fire safety training	11				11	100	100% (100%)
27	11-09-2019	Fire safety training (100% of course)	11				11	100	100% (100%)
31	20-09-2019	Fire safety training (100% of course)				4	4	100	
32	21-09-2019	Fire safety training (100% of course)				1	1	100	
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STATE OF MARYLAND DEPARTMENT OF HEALTH AND HUMAN SERVICES										
TITLE: TRAINING RECORDS										
Effective Date: May 1, 2017										
2016										
ID	Date	Training Module	Number of Persons					Total	Percent of Total	Remarks
			Green	Blue	Yellow	Orange	Red			
01	01/01/2016	First Aid Training	10					10	100	
02	01/01/2016	First Aid Refresher Training	10					10	100	
03	01/01/2016	First Aid Refresher Training	10					10	100	
04	01/01/2016	First Aid Refresher Training	10					10	100	
05	01/01/2016	First Aid Refresher Training	10					10	100	
06	01/01/2016	First Aid Refresher Training	10					10	100	
07	01/01/2016	First Aid Refresher Training	10					10	100	
08	01/01/2016	First Aid Refresher Training	10					10	100	
09	01/01/2016	First Aid Refresher Training	10					10	100	
10	01/01/2016	First Aid Refresher Training	10					10	100	
11	01/01/2016	First Aid Refresher Training	10					10	100	
12	01/01/2016	First Aid Refresher Training	10					10	100	
13	01/01/2016	First Aid Refresher Training	10					10	100	
14	01/01/2016	First Aid Refresher Training	10					10	100	
15	01/01/2016	First Aid Refresher Training	10					10	100	
16	01/01/2016	First Aid Refresher Training	10					10	100	
17	01/01/2016	First Aid Refresher Training	10					10	100	
18	01/01/2016	First Aid Refresher Training	10					10	100	
19	01/01/2016	First Aid Refresher Training	10					10	100	
20	01/01/2016	First Aid Refresher Training	10					10	100	
21	01/01/2016	First Aid Refresher Training	10					10	100	
22	01/01/2016	First Aid Refresher Training	10					10	100	
23	01/01/2016	First Aid Refresher Training	10					10	100	
24	01/01/2016	First Aid Refresher Training	10					10	100	
25	01/01/2016	First Aid Refresher Training	10					10	100	
26	01/01/2016	First Aid Refresher Training	10					10	100	
27	01/01/2016	First Aid Refresher Training	10					10	100	
28	01/01/2016	First Aid Refresher Training	10					10	100	
29	01/01/2016	First Aid Refresher Training	10					10	100	
30	01/01/2016	First Aid Refresher Training	10					10	100	
31	01/01/2016	First Aid Refresher Training	10					10	100	
32	01/01/2016	First Aid Refresher Training	10					10	100	
33	01/01/2016	First Aid Refresher Training	10					10	100	
34	01/01/2016	First Aid Refresher Training	10					10	100	
35	01/01/2016	First Aid Refresher Training	10					10	100	
36	01/01/2016	First Aid Refresher Training	10					10	100	
37	01/01/2016	First Aid Refresher Training	10					10	100	
38	01/01/2016	First Aid Refresher Training	10					10	100	
39	01/01/2016	First Aid Refresher Training	10					10	100	
40	01/01/2016	First Aid Refresher Training	10					10	100	
41	01/01/2016	First Aid Refresher Training	10					10	100	
42	01/01/2016	First Aid Refresher Training	10					10	100	
43	01/01/2016	First Aid Refresher Training	10					10	100	
44	01/01/2016	First Aid Refresher Training	10					10	100	
45	01/01/2016	First Aid Refresher Training	10					10	100	
46	01/01/2016	First Aid Refresher Training	10					10	100	
47	01/01/2016	First Aid Refresher Training	10					10	100	
48	01/01/2016	First Aid Refresher Training	10					10	100	
49	01/01/2016	First Aid Refresher Training	10					10	100	
50	01/01/2016	First Aid Refresher Training	10					10	100	
51	01/01/2016	First Aid Refresher Training	10					10	100	
52	01/01/2016	First Aid Refresher Training	10					10	100	
53	01/01/2016	First Aid Refresher Training	10					10	100	
54	01/01/2016	First Aid Refresher Training	10					10	100	
55	01/01/2016	First Aid Refresher Training	10					10	100	
56	01/01/2016	First Aid Refresher Training	10					10	100	
57	01/01/2016	First Aid Refresher Training	10					10	100	
58	01/01/2016	First Aid Refresher Training	10					10	100	
59	01/01/2016	First Aid Refresher Training	10					10	100	
60	01/01/2016	First Aid Refresher Training	10					10	100	
61	01/01/2016	First Aid Refresher Training	10					10	100	
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64	01/01/2016	First Aid Refresher Training	10					10	100	
65	01/01/2016	First Aid Refresher Training	10					10	100	
66	01/01/2016	First Aid Refresher Training	10					10	100	
67	01/01/2016	First Aid Refresher Training	10					10	100	
68	01/01/2016	First Aid Refresher Training	10					10	100	
69	01/01/2016	First Aid Refresher Training	10					10	100	
70	01/01/2016	First Aid Refresher Training	10					10	100	
71	01/01/2016	First Aid Refresher Training	10					10	100	
72	01/01/2016	First Aid Refresher Training	10					10	100	
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85	01/01/2016	First Aid Refresher Training	10					10	100	
86	01/01/2016	First Aid Refresher Training	10					10	100	
87	01/01/2016	First Aid Refresher Training	10					10	100	
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HONGKONG CONSTRUCTION ENGINEERING CONSULTANTS

REPC'S FORM-FM FORM-01-01 Training Records

REPC'S FORM-FM FORM-01-01-0

TITLE: TRAINING RECORDS

2010		Number of Persons					Training Hours, May 1, 2010		Remarks
#	Date	Training Module	Male	Female	Chinese	Non-Chinese	Total	Number of Days	
01	01-01-2010	Emergency Fire Safety Instruction	1				1	01	
02	11-11-2010	Emergency Fire Safety Instruction				1	1	01	
03	11-11-2010	Fire Emergency Wood Deck Training with PDA	00	0		00	00	00	
04	11-11-2010	Emergency Fire and Life Safety Instruction				00	00	00	
05	12-12-2010	Fire Safety Instruction	00				00	00	
06	10-10-2010	Emergency Fire Safety Instruction	2				2	01	
07	10-10-2010	Emergency Training				0	0	00	
08	11-11-2010	Emergency Fire Safety Instruction				1	1	01	
09	10-10-2010	Fire, Alarm, Safety Training	01				01	01	
10	10-10-2010	Fire Alarm Training	1				1	01	
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SBPCL-GM/FM/DEM/00-00-01 Training Record									
TITLE: TRAINING RECORDS									
Training Year: 2018									
Training Month: 01/2018									
Training Date: 01/01/2018									
Training Time: 09:00 AM - 05:00 PM									
Training Location: SBPCL-GM/FM/DEM/00-00-01									
Training Topic: Safety Training									
Training Method: Classroom Training									
Training Duration: 6 Hours									
Training Cost: 100000									
Training Results: 100%									
Training Remarks: All participants passed the training successfully.									
Total Minutes: 360									
Total Hours: 6									

SBPCL-GM/FM/DEM/00-00-01 Training Record									
TITLE: TRAINING RECORDS									
Training Year: 2018									
Training Month: 02/2018									
Training Date: 02/01/2018									
Training Time: 09:00 AM - 05:00 PM									
Training Location: SBPCL-GM/FM/DEM/00-00-01									
Training Topic: Safety Training									
Training Method: Classroom Training									
Training Duration: 6 Hours									
Training Cost: 100000									
Training Results: 100%									
Training Remarks: All participants passed the training successfully.									
Total Minutes: 360									
Total Hours: 6									



ANNEX 05

AMBIENT AIR TEST REPORT

Industry & Facilities Division				<input type="checkbox"/> Inspected <input type="checkbox"/> Filled	
INSPECTION REPORT N° BV/NCP/ANL/JUN/18					
BV Job nr: BAN.D.415.018.208					
PROJECT: Stack emission & Environmental Monitoring at Summit Sulayana S. Power Company Limited (361 MW CCPP)				Ref: BAN.D.415.018.208	
BY Client: Summit Sulayana S. Power Company Limited (361 MW CCPP)				P/O nr: N/A	
Manufacturer: N/A				P/O nr: N/A	
Inspection requested by: Mr. Sarutthanan, 0176879487					
Stack emission & Environmental Monitoring at SUMMIT SULAYANA S. POWER COMPANY LIMITED (361 MW CCPP)		Common Environmental Parameters			
DOCUMENTS OF REFERENCE See continuation sheet for additional documents <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No					
Title		Reference n°	Rev	Approved by	Date
PURCHASE ORDER		n/a			
INSPECTIONS Inspection date: June 11, 2018 Period: Nighting, Nocturnal Hangzhou Scope of inspection: <input type="checkbox"/> Before manufacturing <input type="checkbox"/> During manufacturing <input type="checkbox"/> Final <input type="checkbox"/> Packing Type of inspection: <input type="checkbox"/> Pre-inspection meeting <input type="checkbox"/> Document and QC record review <input type="checkbox"/> Visual examination, checks <input type="checkbox"/> Witnessing tests <input type="checkbox"/> Manufacturing progress check <input type="checkbox"/> Vendor assessment <input type="checkbox"/> Final inspection <input type="checkbox"/> Packing (If needed, see continuation sheet)		Results of inspection: <input checked="" type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory See Conformity Reports (NCR) NCR's issued during reported period: N/A List of outstanding NCR's: N/A Next visit scheduled: No schedule found yet			
Remaining: <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> Yes					
100% 100% 100%					
100% 100% 100%					



Industry & Facilities Division		 SBPCL		<input type="checkbox"/> Inform <input checked="" type="checkbox"/> Final				
INSPECTION REPORT N° BY NRP/550, DUNE/14								
BY Job no: BAN.D.415.018.200								
<u>AMBIENT AIR QUALITY TESTING REPORT</u>								
Standard								
Sl. No	Parameter	IEC Standards	ISIRI Standards					
		µg/m ³	ppm					
1	Permissible Major TSP (PM ₁₀)	110 (24 hr)	85 (24 hr)					
2	Permissible Major TSP (PM ₁₀)	110 (24 hr)	120 (24 hr)					
3	Permissible Suspended Matter (PM ₁₀)	50	250 (24 hr)					
4	Nitrogen Dioxide (NO ₂)	40	100					
5	Sulphur Dioxide (SO ₂)	117 (0.6 µg)	363 (11 µg)					
6	Ozone (O ₃)	100 (0.03 µg)	117					
7	Carbon Monoxide (CO)	N/A	1000 (0.03 µg)					
8	Carbon Dioxide (CO ₂)	N/A	< 1000 ppm					
<u>Ambient Air Test Results</u>								
Point description	PM 2.5	PM 10	SPM	NO ₂	SO ₂	O ₃	CO	CO ₂
East side village area (Perkad)	13	31	103	12.2	13.78	98	1	412
South side village area (Faharpur)	14	34	96	15.1	14.23	84	2	423
Near 2nd gate	33	41	94	18.3	13.23	83	1	407
unit	µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	ppm	ppm
Remarks	As reported	As reported	As reported	As reported	As reported	As reported	As reported	As reported
4 NRP-001.0 BAN.D.101		Copyright Bureau Veritas 04/2011						



ANNEX 06

RESULTS OF GROUNDWATER QUALITY ANALYSIS

	Government of the People's Republic of Bangladesh Office of the Chief Chemist Department of Public Health Engineering Central Lab. 58-59, Mohakhali C/A, Dhaka-1212 <small>Phone: 88-02-9671271 Fax: 88-02-9671272 E-mail: chemist@dohe.gov.bd</small>	
Lab No.: 1811 CC, DHE, D, Dhaka		Date: 22-07-2018

Physical /Chemical/Bacteriological Analysis of Water Sample

Sample ID: CC021807088	Sample Receipt Date: 21-07-2018
Ref. Memo No. SBPCL/CC/18/A Dated: 20-05-2018	Sample Source: Open Tube Well
Sample Description: Summit Shallow Piezo (1.5m) - 100m	Dist/Type: URB
Geo Tag: Summit Shallow Piezo (1.5m) - 100m	Locality: URB
Sample Collection Date:	Date of Testing: 06/07/2018 (20180706)

LABORATORY TEST RESULTS:

S.N	Water quality parameter	Bangladesh Standard	Concentration found	unit	Analysis Method	LOG
1	Biochemical Oxygen Demand (BOD)	10	4	mg/L	5 days incubation	0.1
2	Acidity (H)	1.5	0.20	mg/L	UVS	0.35
3	Chlorine (CL)	0.50	0.0005	mg/L	AA3	0.0005
4	Dissolved Oxygen Demand (DO)	4.0	10	mg/L	DOB	-
5	Salinity	10	0.01	mg/L	UVS	-
6	Hydrogen (H)	1.5	0.18	mg/L	AA2	0.36
7	Ca (Hard)	200	0.007	mg/L	AA3	0.0007
8	Dissolved Oxygen (DO)	4.0	0.01	mg/L	AA3/AA4	-
9	Fluoride	1.5	0.14	mg/L	UVS	0.13
10	Iron (Fe)	0.30	0.001	mg/L	AA2	0.001
11	Manganese (Mn)	0.05	14	mg/L	AA2	0.014
12	Nitrogen (NH4)	10.0	0.3	mg/L	UVS	0.33
13	Nitrogen (NO3)	45.0	3	mg/L	UVS	0.33
14	Salinity	1000 mg/L	0	mg/L	Thomson Method	-
15	Phosphate	0.1	0.03	mg/L	UVS	-
16	Potassium (K)	12.0	1.07	mg/L	AA3	-
17	Sulfate (SO4)	250	41	mg/L	AA3	0.24
18	Sulfate	400	1	mg/L	UVS	0.1
19	Temperature	20.0	28.3	°C	Thermometer	-
20	Total Suspended Solids (TSS)	5	1	mg/L	Gravimetric Method	-
21	Total Solids	100	100	mg/L	AA2	0.05





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Sl. No.	Water quality parameters	Sampling Standard	Concentration present	Unit	Analysis Method
<p>Comments: Sample was collected & supplied by client. N.B. JMS. Atomic Absorption Spectrophotometer, VFA-24 visible Spectrophotometer, (TSS) Direct Reading Method, LOD: Limit of Quantitation.</p>					
<p>Test Performed by:</p> <p>1) Name: Manjusha Zahra Nohi Designation: Sample Analyst</p> <p>2) Name: Mr. Sarda Hari Phary Designation: Sample Analyst</p>		<p>Countermanded/Supervised By:</p> <p>1) Name: Mr. Sarda Hari Phary Designation: Chief Officer</p> <p>2) Name: _____ Designation: _____</p>			
<p>Signature: _____ Date: 22-04-18</p> <p>Signature: _____ Date: 22-04-18</p>		<p>Signature: _____ Date: 22-04-18</p> <p>Signature: _____ Date: 22-04-18</p>			



TEST REPORT OF GROUND WATER ANALYSIS

Report No. : TUVAT051819110230501
 Factory Name : China Northeast Electric Power Engineering and Services Co. Ltd.
 (NEPEC)
 Factory Address : Portul, Atligganj, Nongong, Itanagar, Bangladesh
 Sample Collector : TUV Austria Monitoring Team
 Description of Sample : Different type of Ground Water Parameters Analysis
 Sampling date : 2nd January 2019 (Time: 14:30 PM)
 Reporting date : 18th January 2019

Table-1: Test result of ground water quality parameters of supplied water

Name of the parameters	Unit	Standards for drinking water quality as per DOE (ECR BP)	Results
Aluminium	mg/L	0.3	0.001
Arsenite (As ₂ O ₃)	mg/L	0.3	0.013
Boron	mg/L	0.1 (max)	0.031
Bromine	mg/L	0.01	<0.001
Calcium	mg/L	75	33.2
Chlorine (residual)	mg/L	0.2	0.014
Chromium	mg/L	0.05	<0.001
Chromium (Hexavalent)	mg/L	0.05	0.003
Cyanide	mg/L	0.1	<0.001
Dechlorinate	mg/L	0.3	0.011
Fluoride (free) (F ⁻)	mg/L	1.5	0.08
Mercury	mg/L	0.01	<0.001
Nickel	mg/L	0.1	0.004
Phenol, compounds	mg/L	0.02	<0.002
Phosphorus	mg/L	0.3	0.00
Selenium	mg/L	0.01	0.000
Silver	mg/L	0.05	0.013
Sulfide	mg/L	0.05	0.00
Tin	mg/L	2.5	0.004
Oil & Grease	mg/L	0.01	0.000

Comment: As per ECR BP schedule-10 rule (3), Government of Bangladesh did not provide standard for the water quality of ground water. If the water quality of groundwater matches with standard level of drinking water, then this water might be used as drinking water. The above parameters have been analyzed by the suitable analytical methods. The concentration of water quality parameters was below the level of standard of drinking water quality as per ECR 1997.

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 International Head Office: Ringierstrasse 16, 6040 Wilmer Austria, Tel: +43 66 422424
 www.jurit.com.bd info@jurit.com.bd



Table 2: Test result of ground water quality parameters of supply water

Name of the parameter	Unit	Standard for drinking water quality as per DCR (ECR 97)	Results
Chlorinated alkanes			
Carbon tetrachloride	mg/L	0.01	<0.001
1,1 dichloro ethane	mg/L	0.001	<0.001
1,2 dichloroethane	mg/L	0.03	<0.001
Tetra chloroethene	mg/L	0.03	<0.001
Trichloroethene	mg/L	0.09	<0.001
Chlorinated phenols			
Pentachlorophenol	mg/L	0.03	0.001
2,4,6 Trichlorophenol	mg/L	0.03	0.002

Comments: The organic chloroalkanes and chlorophenols have been analyzed by the nitrogen analytical methods. The concentration of chloroalkanes and chlorophenols were within the limit of standard of drinking water quality as per DCR 1997.

This Certificate does not imply any responsibility on the part of the signatory, relating to the data presented. The Certificate does not release the signatory from their contractual responsibilities with regard to participating in the testing nor does it demonstrate the signatory's right of free access to the information for dissemination for any reason other than that which the signatory has agreed to provide in writing to the testing agency.

ANNEXES ☒ Yes (Total number of pages: 0)

☒ No

Coordinated by: Name: Md. Jau n Alam (Signature) For:  Signature: Date of issue: 19 th January, 2019 Inspection center: TUV Austria BPC Bangladesh		Checked by: Name: Md. Mubashir Hossain  Signature:
--	---	--

Page 2 of 2

Registered office: House 175/177 Road 1, P.O. Box 104, Dhanmondi 2, Dhaka-1207, Bangladesh. Tel: 00880 21 888888, 71 888888
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 International head office: Flughafenstr. 14, 50829 Cologne, Germany, Tel: +49 221 345 40
 www.tuv-austria.com



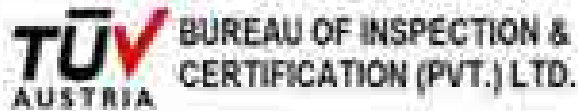
ANNEX 07

RESULTS OF RIVER WATER QUALITY ANALYSIS

SURFACE WATER TEST RESULT

(Tested by DPHE Lab.)

	STANDARD LIMIT AS PER DOE (ICRP) FOR INLAND SURFACE WATER (SCHEDULE 3A)								
Parameters	Unit	Source of drinking water for supply only after disinfecting	Water usable for recreational activity	Source of drinking water for intake after conventional treatment	Water usable by humans	Water usable by vertical process and cooling industries	Water suitable for irrigation	Result	
		50 m Up Stream of Kuchlata River							
Total Coliform Number/100		10 or less	200 or less	5000 or less		5000 or less	1000 or less	80	
DO	mg/L	8 or above	7 or more	6 or more	5 or more	5 or more	5 or more	7.1	
pH		6.5-8.5	6.5-8.5	6.5-8.5	6.5-8.5	6.5-8.5	6.5-8.5	7.22	
		50 m Down Stream of Kuchlata River							
Total Coliform Number/100		10 or less	200 or less	5000 or less		5000 or less	1000 or less	100	
DO	mg/L	8 or above	7 or more	6 or more	5 or more	5 or more	5 or more	7.1	
pH		6.5-8.5	6.5-8.5	6.5-8.5	6.5-8.5	6.5-8.5	6.5-8.5	6.82	



TEST REPORT OF SURFACE WATER ANALYSIS

Report No. : TUVAT/2018/1911/0330/003
 Factory Name : China Northeast Electric Power Engineering and Services Co. Ltd. (NEPCS)
 Factory Address : Parkul, Arakpur, Hatigant, Hailugant, Bangladesh
 Sample Collector : TUV Austria Monitoring Team
 Description of Sample : Different type of Surface Water Parameters Analysis
 Sampling date : 3rd January 2019 (Time: 11.30 PM)
 Reporting date : 19th January 2019

Table 1: Test result of Surface water quality Parameters of supplied water

Name of the parameter	Unit	Standard limit as per DOE (DOHST) for mixed surface water (Schedule 3-A)						Results
		Source of drinking water for supply only after disinfecting	Water usable for recreational activity	Source of drinking water for supply after conventional treatment	Water usable by fisheries	Water suitable by industry process and cooling industries	Water suitable for irrigation	
BOD (Discharge Point)	mg/l	2 or Less	3 or Less	5 or Less	6 or Less	10 or Less	10 or Less	0.24
DO (Discharge Point)	mg/l	8 or Above	5 or More	6 or More	5 or More	5 or More	5 or More	5.66
pH (Discharge Point)	-	6.5-8.5	6.5-8.5	6.5-8.5	6.5-8.5	6.5-8.5	6.5-8.5	7.1
Total Coliform Number/100 (Discharge Point)	-	30 or Less	200 or Less	5000 or Less	—	5000 or Less	1000 or Less	880

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ANNEXES ☐ Yes (Total number of pages: 0) ☒ No

Coordinated by: Name: M.E. Tour e Alam Siddiqui For:  Signature: Date of issue: 07 January 2018 Inspection centre: TUV Austria BIC Bangladesh		Checked by: Name: Shahmudul Hossain  Signature:
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Page 2 of 2

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ANNEX 08

RESULTS OF SLUDGE QUALITY ANALYSIS

Industry & Facilities Division		 INSPECTION REPORT N° BY/SD/PCS/SE, JUNE 18		<input checked="" type="checkbox"/> Inform <input type="checkbox"/> Final	
BV Job no: BAN.D.415.018.208					
PROJECT: ETP sludge analysis at Sumit Bityana II, Power Company Limited (341 MW CCPP)				Ref: BAN.D.415.018.208	
BV Client: Sumit Bityana II, Power Company Limited (341 MW CCPP)				P/o no: N/A	
Manufacturer: N/A				P/o no: N/A	
Inspection requested by: Mr. Satyanarayan, Q179/20487					
SUBJECT: ETP sludge analysis at SUMIT BITYANA II POWER COMPANY LIMITED (341 MW CCPP)		TEST CODE: Common Environmental Parameters			
DOCUMENTS OF REFERENCE : See continuation sheet for additional documents <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No					
Title		Reference no	Rev.	Approved by	Date
PURCHASE ORDER		n/a			
INSPECTIONS : <u>Inspection place:</u> Date: 11/2018 Pankaj, Nohogang, Hahogang, Bangladesh <u>Stage of inspection:</u> <input type="checkbox"/> Before manufacturing <input checked="" type="checkbox"/> During manufacturing <input type="checkbox"/> Final <input type="checkbox"/> Packing <u>Type of inspection:</u> <input type="checkbox"/> Pre inspection meeting <input type="checkbox"/> Document and QC record review <input type="checkbox"/> Visual examination: checks <input checked="" type="checkbox"/> Witnessing tests <input type="checkbox"/> Manufacturing progress status <input type="checkbox"/> Vendor assessment <input type="checkbox"/> Final inspection <input type="checkbox"/> Packing (If details are continuation sheet)			Results of inspection: <input checked="" type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory <u>Non-Conformities Reports (NCR):</u> NCR's issued during reported period: <u>N/A</u> <u>List of outstanding NCR's:</u> <u>N/A</u> <u>Next visit scheduled:</u> No schedule found yet		
Stamping: <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> Yes					
6 HSE 002 Dr- GM 51-101			Copyright Sumit Veritas 04/2018		



Industry & Facilities Division		 INSPECTION REPORT N° IV/NIPCS/SE/JUN/18 BY Job no: HAN.D.415.018.208		42 Interim 1 Final	
<p>Sledge physical condition: Sledge has been collected from the bed and not from the sledge storage. It has close to maximum moisture content in sledge and analysis is in dry and wet basis.</p>					
<p>Concentrations of different parameters of sledge</p>					
Sl. No.	Parameter	Unit	Result		
1	pH	-	7.68		
2	Moisture	-	49.34%		
			Dry basis	Wet basis	
3	Lead (Pb)	mg/kg	5.12	4.41	
4	Cadmium (Cd)	mg/kg	1.72	1.01	
5	Chromium (Cr)	mg/kg	7.81	6.52	
6	Copper (Cu)	mg/kg	14.44	11.42	
7	Nickel (Ni)	mg/kg	12.72	10.33	
8	Mercury (Hg)	mg/kg	0.001	0.001	
9	Zinc (Zn)	mg/kg	28.11	23.88	
10	Arsenic (As)	mg/kg	2.21	1.63	
 INSP 002 En GM SE 108			Copyright Bureau Veritas 04/2011		



Industry & Facilities Division	 INSPECTION REPORT N° BY NEPCS SE JUNE 18 BV Job nr: BAN.D.415.010.20H		
<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="width: 50%; text-align: center;">Interim</td> <td style="width: 50%; text-align: center;">Final</td> </tr> </table>		Interim	Final
Interim	Final		
<p style="font-size: small; color: gray;">"The inspection results are valid at date and place of inspection. The above inspection has been carried out according to Bureau Veritas general conditions of service, the issuance of this inspection report does not release the contracted parties from their own responsibilities and the fulfillment of their obligations."</p> <p style="font-size: small;">ANNEXES <input type="checkbox"/> Yes (Total number of pages: ...) <input checked="" type="checkbox"/> No</p>			
Issued by: Name: Karick Chandra Mondol Signature:	Checked by: Name: Kousik Das Signature:		
Date of issue: June 20, 2019			
Inspection centre: BV Dhaka			
Distribution: <input checked="" type="checkbox"/> Summit power 331 MW. <input type="checkbox"/> BV Bangladesh.			
<div style="display: flex; justify-content: space-between;"> <div style="font-size: x-small;"> 1 WSP 002 En CM 02 104 </div> <div style="font-size: x-small; text-align: right;"> Copyright Bureau Veritas 04/2011 </div> </div>			



TEST REPORT OF SLUDGE SAMPLE (DRY BASIS) ANALYSIS

Report No : TUVAT/2018/1911/230/004
 Factory Name : China Northeast Electric Power Engineering and Services Co. Ltd. (NEPCS)
 Factory Address : Parkul, Afrozgari, Nabigari, Hobigari, Bangladesh
 Sample Collector : TUV Austria Monitoring Team
 Description of Sample : Sludge sample analysis
 Sampling date : 3rd January 2019 (Time: 16:30 PM)
 Reporting date : 9th January 2019

Table 1: Test result of **Sludge** quality parameter of supplied sludge

Name of the parameters	Unit	Result (dry basis)
Phenolic	mg/kg	1.30
Fluoride	mg/kg	<0.01
Barium	mg/kg	2.54
Chloride	mg/kg	32.5
Sulfate	mg/kg	12.2

Comment: There is no specified level for sludge for the above mentioned parameters. The results of parameters have been given by dry basis.

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Coordinated by: Name: Mr. Nur-e-Alam Siddique For:  Signature: Date of issue: 9th January 2019 Inspection center: TUV Austria BCI Bangladesh	 Checked by: Name: Mahmudul Fiazan  Signature:
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ANNEX 09

RESULTS OF WASTEWATER ANALYSIS

WASTEWATER TEST REPORT

(Conducted by DPHE Lab)

Sl	Parameters	Unit	Treated Water Result by DPHE (2018)	Bangladesh Standards
1	Ammonia as free Ammonia	mg/l	0.11	3
2	Arsenic	mg/l	0.031	0.2
3	BOD ₅ 20°C	mg/l	8	50
4	Cadmium (as Cd)	mg/l	0.00018	0.3
5	Chloride	mg/l	18	600
6	Chromium (as Cr)	mg/l	0.004	0.3
7	CO ₂	mg/l	29	700
8	Copper (Cu)	mg/l	0.26	0.5
9	Dissolved Oxygen	mg/l	5.83	6.5-8
10	Electro Conductivity, EC	micro mho/cm	465	1200
11	Total Dissolved solid	mg/l	279	2100
12	Fluoride	mg/l	0.12	2
13	Iron, Fe	mg/l	0.2	2
14	Lead	mg/l	0.002	0.3
15	Manganese	mg/l	0.7	3
16	Nitrate (as Elementary N)	mg/l	5.7	10
17	pH		7.2	6-9
18	Zinc	mg/l	0.88	5
19	Total Dissolved solid	mg/l	279	2100
20	Temperature	°C	16.5	40 (summer)-45 (Winter)
21	Suspended solid	mg/l	12	150



TEST REPORT OF WASTE WATER ANALYSIS

Report No.	TUWAT/2018/1911235/002
Factory Name	China Northeast Electric Power Engineering and Services Co. Ltd. (NEPCS)
Factory Address	Pachul, Mungang, Nabeung, Hobiqung, Bonghaedon
Sample Collector	TUW Austria Monitoring Team
Description of Sample	Different type of Waste Water Parameters Analysis
Sampling date	2nd January 2019 (Time: 15:00 PM)
Reporting date	07th January 2019

Name of the parameter	Unit	Standard limit as per DOE (ISCR97) for clean surface water	Standard limit as per DOE (ISCR97) Public sewerage system connected to treatment of treated effluent	Standard limit as per DOE (ISCR97) Impaired body	Result
Ammoniacal Nitrogen (as elementary N)	mg/L	50	75	75	12.42
Boron	mg/L	2	2	2	0.08
Chromium (as Hexavalent)	mg/L	0.1	1.0	1.0	0.04
Sulfide, S	mg/L	1.0	2.0	2.0	0.64
Total Kjeldahl Nitrogen (as N)	mg/L	100	100	100	30.21
Nickel (as Ni)	mg/L	1.0	2.0	1.0	0.33
Oil & Grease	mg/L	10	20	10	3.21
Phenolic Compounds (as C ₆ H ₅ OH)	mg/L	1.0	1.0	1.0	0.26
Dissolved Phosphorus (as P)	mg/L	8	8	18	3.21
Selenium (as Se)	mg/L	0.05	0.05	0.05	0.02
Mercury	mg/L	0.01	0.01	0.01	<0.001
Cyanide	mg/L	0.1	0.1	0.2	<0.001

Comment: As per ECR 97 schedule-10 (rule 13), Government of Bangladesh has been monitoring standard for waste from industrial units or project waste water. Above 12 parameters have analysed by the appropriate analytical method. The level value of above mentioned parameters of supplied waste water source did not cross the limit of standard for waste from industrial units or project waste water.



ANNEXURE ☐ Yes (Total number of pages) ☐ No

Coordinated by:
Nathan M.D., Ph.D. & Adam Erickson
Ph.D.

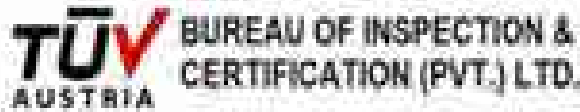
Checked by:
Name: Matthew J. Hagan



Signature

Signature: _____
Date of issue: 17th January 2018
Inspection centre: TÜV Austria AG Innsbruck

1998



TEST REPORT OF RADIOACTIVE SUBSTANCES FOR WASTE WATER

Report No: TUVAT/2018/1915/238-987
 Factory Name: China Northeast Electric Power Engineering and Services Co. Ltd. (NEPCS)
 Factory Address: Parkul, Ahlagari, Nalagar, Harigan, Bangladesh
 Sample Collector: TUV Austria Monitoring Team
 Description of Sample: Waste water Quality Parameters
 Sampling date: 3rd January 2019 (Time: 15:00 PM)
 Reporting date: 22nd January 2019

Table 1: Test result of radioactive substances or materials (gross alpha and beta activity) of supplied waste water

Name of the parameters	Units	WHO Reference Level (Bq L ⁻¹)	ECR 1987 Schedule-3 (Standard for drinking water (Bq L ⁻¹))	Results (Bq L ⁻¹)
Radioactive substances (gross alpha activity)	Radioactivity level (Bq L ⁻¹)	0.1	0.01	0.0047
Radioactive materials (gross beta activity)	Radioactivity level (Bq L ⁻¹)	1.0	0.1	0.0068

Comment: The level of radioactive substances in waste water do not specify by Bangladesh Atomic Energy Commission and the standard level did not mention in ECR 1987 (Schedule 30, Rule 53). The contamination of radioactive substances in wastewater might be by processing industrial water and by the Naturally-Occurring Radioactive Materials (NORM). The results of radio activity (gross alpha & gross beta) of supplied wastewater were comparatively lower the standard for drinking water as per ECR 1987.

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Coordinated by:
 Name: Md. Nur Alam Siddique
 For

Signature:
 Date of Issue: 22nd January 2019
 Inspection centre: TUV Austria BIC Bangladesh



Checked by:
 Name: Md. Masudul Haque

Signature:

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ANNEX 10

DRILL CALENDAR 2018

[illegible]

ANNEX 11

EMERGENCY DRILL REPORT

 SUNAT	Sesent Bilqees Power Plant Report of Firefighting Drill	 NBPCC
Activity Report 2016 Region/Firefighting (NBPCC) or emergency without fire service and civil defense		
The NBPCC FORM-1234-01		
AUTHOR	REVIEWER	APPROVER
Name Signature/Date	Name Signature/Date	Name Signature/Date
Mr. [Name] 2016-04-04	Mr. [Name] 2016-04-04	Mr. [Name] 2016-04-04
ADDRESSSES: (1) (2) Social Community and Cooperative Managers, NBPCC, VNA YNHN Shift in charge, 2016 staff, NBPCC and others, sub-contractors, Bangladesh Fire Service and Civil Defense (Shift)		

1. Background



At 11:52 am of 4th April, 2016, sudden emergency response drill was conducted in the place of demineralized water plant & chemical building area/Thermal power plant. It was sunny with the ambient temperature of 28-30°C and with the south west wind.

All GT, STG, ST and STG were in operation. Fire service was going and there emergency fire pump was recently visited NBPCC, NBPCC and Subnet employees were working in different location in the power plant.

2. Reason

At 11:52 am of 4th April, 2016, NBPCC OSM conducted the fire emergency response drill of the year 2016. Accident assumption was that a fire occurred in the place of demineralized water plant & chemical building area of Bilqees power plant. One operator people in duty saw the dense smoke coming out of the demineralized water plant & chemical building area and then reported to the shift in charge in duty with a walk-talky. The shift in charge immediately informed all relevant person such as firefighters, Civil staff, department managers and general manager to respond the fire emergency. Having received the telephone call, all relevant person such as general manager, shift manager, representatives, maintenance department representative and operation manager respectively went to the fire spot to take part in the emergency response. As soon as the firefighting truck arrived at demineralized water plant & chemical building area, security personnel NBPCC firefighters got off the fire truck and immediately ran into the affected area. After searching throughout the entire area, fire was found at the demineralized water plant. Then the power plant safety guard then find all immediately at the same time, two fire fighters were looking for the fire point with their safety gear. Our incident coordinator also reported to Subnet firefighting team saying the fire is out of control. Any way cause some injuries. After receiving our report Bangladesh fire service and Civil Defense came within 45 minutes for power plant. They came without firefighting truck and ambulances are coming from truck. After they arrived at our power plant, fire team immediately divided into 3 groups to rescue injured people, put out the fire and gave first aid to injured people. NBPCC management also gave assistance to transport the hose to the truck for suppressing the



	Summit Bihyana Power Plant	
SUMMIT	Report of Firefighting Drill	

fire. Meanwhile, other team cooling one person was still missing. Then based on query the injured person location identified and successfully given medical. The main process of the firefighting drill is as that in the table below:

The Major Response Process of the drill:

Time	Persons Concerned	Practical Situation	Remarks
11:32 am	Onoperation people on duty	Reported immediately to the shift in charge on duty with walkie-talkie that fire occurred in the place of domesticated water plant & chemical building area and a dense smoke came out.	As per the drill plan
11:33 am	Shift in charge on duty	Immediately inform fire fighters, general manager, operation manager, shift manager and maintenance manager the fire emergency occurred area. Broadcasted to evacuate every employee/workers.	In conform with the plan
11:34 am	Shift staffs	Immediately asked security guards to release the area with safety warning tape, not allowing any vehicle/persons to pass that area.	In conform with the plan
11:35	All office staff and workers	Immediately evacuated through the safety exit in the CCR to assembly point at No. 2 gate of the plant.	In conform with the plan
11:38 am	Firefighters and supervisor	Got to the site by taking fire truck with alarm along the way to take part in the fighting emergency response.	In conform with the plan
11:39 am	Security guards	Two security guards with ERT member immediately entered into domesticated water plant & chemical building areas search for any person injured one there. Finally they found 2 people get injured. One of them got hit in the leg and one of them got burned at hand. Our ERT team took them out and send first aid treatment point. Other's security guard immediately took a fire hose to a firestation near the affected area corner and started put out fire.	In conform with the plan
11:39 am	Security guards other staff	Completed the location of the firefighting and with the safety warning band for stopping intensive persons to enter in and guaranteeing no interference in firefighting and rescuing.	In conform with the plan
11:42 am	NERDC Assistance	Took injured person to the nearest hospital for further treatment.	In conform with the plan



Summit Bityana Power Plant		Report of Emergency Drill	
Summit Bityana Power Plant		Report of Emergency Drill	
No.	Description of improvement	Responsible	Remarks
1	Challenges: Fire Service and Civil Defence (SD) inspected/recommended their suggestions. First, they appreciate about our firefighting team for their emergency response. They do their work better than others organization. They request EHS manager to improve firefighting training in continuous basis and have more drills which will help the handling of any emergency situation.	EHS	Strengthen training and training for firefighting
2	Plant manager & EHS manager did to evacuate ourselves as soon as possible. And watch out for falling while evacuation. Furthermore, asked them to Local chairman, members as well as new Bityana-3 plant people to participate.	EHS	Strengthen training and improve from next drill

3. Assessment of the Procedure and the Plan

Sufficiency and feasibility of emergency plan and procedure. Through the exercise, we observed that the site fire emergency response plan and other emergency response procedures were feasible and basically applicable.



8. Fire Fighting Emergency Drill photo





ANNEX 12

FIRE DRILL REPORTS

SBPCL Logo

SBPCL FORM FMT/18-02-18

TITLE: Report of Mass drill

Department: EHS

Activity Report (2018)

Fire Emergency Block DRG passing with local Bangladesh Fire and civil Defense-October-2018

AUTHOR			REVIEWER			APPROVER		
Name	Signature	Date	Name	Signature	Date	Name	Signature	Date
Mr. Tarek Hossain		07/10/18	Mr. Mustafiz Hossain		07/10/18	Mr. Garg		07/10/18

Attachment: Sheet is an attachment.

1. Back Ground

At 11:30 am of October 11, 2018, the fire emergency response drill was conducted in front of the cooling tower area where nearly 1000 water tank in Hissara power plant. It was started with the ambient temperature of 34.25 °C and with the wind speed 10 km/h.

At 11:30 AM, RT and STG were in operation. Fire alarm, main power and diesel emergency the alarm were normally available. During NBPCL, NBPCL and other contractor's employees were working in different locations in the power plant.

2. Report

At 11:30 am of October 11, 2018, NBPCL (SBPCL) conducted the fire emergency response drill in the year 2018. Accident assumption was that a fire occurred in front of the cooling tower area where nearly 1000 water tank in Hissara power plant. One operator people in July saw the smoke coming out from the top of the tank and then reported to the chief of the plant with a walkie-talkie. The chief in charge immediately informed all relevant persons such as firefighters, EHS staff, department manager and general manager to respond the fire emergency. Having received the telephone notification, all relevant persons such as general manager, EHS manager, HR department representative, maintenance department representative and operation manager respectively went to the fire alarm in this part in the emergency response. As soon as the firefighting truck arrived at in front of the cooling tower area, security people and NBPCL firefighters got off the fire truck and immediately started 1000 water tank tanks. After starting nearly 1000 water tank tanks for 10 minutes, 10000 people were stood in the top of the nearly water tank and another two person was found down side of the nearly water tank and them at once were sent out by helicopter to the fire and water. Then our power plant doctor gave them first aid treatment immediately. At the same time, two fire fighters went for testing the fire pump with three nearby guests. Our highest management was reported to Bangladesh fire and civil defense fighting team quarters about the fire and it is confirmed that there was no fire. After receiving the report, Bangladesh Fire Service and Civil Defense came within 45 minutes to our power plant. They came with one firefighting truck and two support one (one) fire truck. After they arrived at our power plant, they then immediately started the fire truck to remove injured people, put out fire and gave first aid to injured people. NBPCL management was given instruction to conduct the fire to be started for experiencing the fire. The main purpose of the firefighting drill is to test the plant power.



   			
Summit Emergency Power Plant			
Report on Evacuating Drill			
<p>process. MTCC management also gave instruction to connect the truck to the network for supporting the fire. The main process of the firefighting drill is as that of the table below.</p>			
The Major Response Process with Drill			
Time	Persons Engaged	Procedure/Reaction	Remarks
12:00 AM	Observation people on duty	Planned immediately to the drill in case of any fire with early help that the incident inside the EOP room. First of hydrogen station area where maintenance station tank is. Different power stations & some other tanks but in the emergency hydrogen production room.	As per the drill plan
12:01 AM	Staff emergency on duty	Immediately inform the firemen, general manager, operation manager, shift manager and maintenance manager for the emergency occurred.	In accordance with the plan
12:02 AM	Shift staff	Immediately inform security guards to make the area with safety warning tape, not allowing visitors to enter that area.	In accordance with the plan
12:04 AM	Evacuation and assembly	Out to the exit by taking the truck with alarm along the way to take part in the lighting emergency response.	In accordance with the plan
12:08 AM	Address staff and workers	Immediately evacuated through the safety exit of the EOP to assembly point as per the plan.	In accordance with the plan
12:10 AM	Security guards	Two security guards near EOP number immediately opened into the front of hydrogen area, raised alarm station tank under watch for any person found out there. Finally they found a person got injured. Our EOP team took him out and sent him to hospital. Other security personnel immediately took a fire hose to a full-scale test for stream. Another team under emergency got out fire.	In accordance with the plan
12:12 PM	Security guard over wall	Completed the location of the firefighting area with the safety warning tape for stopping visitors persons to enter in and surrounding as reference to firefighting and rescue.	In accordance with the plan
12:15 AM	Responsible fire and first response	Started spraying the water from their tank to the main station tank. Other team member disconnecting the connector of the hose to a fire truck, quickly pulled the fire hose to the front of hydrogen station area where water station water tank area and used to extend for testing fire water.	As per the drill plan
12:18 AM	Attendance	First injured person to the nearest hospital for further treatment. More than 12 persons are trained in firefighting by attendance.	In accordance with the plan



Time		Activity		Remarks	
11:45 am	Operation engineer	Started spraying fire water to the fire point and the water discharge rapidly by the density loss just because of water continue spraying and resulted the pump was automatic shut to being certain pressure. The operation engineer continue monitoring the fire water supply system.		It conforms with plan.	
11:46 am	Operation Manager, EHS Manager	Arrived at the fire scene to take part in and give command to the fire fighting staff. When they saw the accident level is out of control level - if so per our emergency response procedure, they contacted incident commander to communicate with current community manager for ask local community leader such as Union Chairman (Kashyap) and Member Nagaraj for their help if the fire is out of control when the level is above 30.		It conforms with plan.	
12:10 PM	Barangamul Fire Service and Civil Defense	Arrived at the fire scene to take part in the fire fighting with our ERT team. With fire fighting team's cooperation, the fire was under control then. After Bangladesh Fire Service and Civil Defense (Barangamul) searched the fire point and again extinguishing the fire already stop.		It conforms with plan.	
12:47 am	MEPCO operation staff	Arrived at the fire scene to taking part in the Emergency response.		It conforms with plan.	
12:49 PM	Firefighters	After receiving the information that fire was completely put out, they closed the valve of the hydrant to stop spraying water. Moreover they shift their fire truck and park their truck in the parking area.		It conforms with the plan.	
12:55 am	Deputy mission director of Bangladesh fire and civil defense	Mr. Muzibur Khan discussed the end of the drill and he gave a summary of the emergency work, did that the unit had learned and the requirement of the emergency situation handling, but there were still something to improve. Such as everyone should be involve who are they adult and strong is helping the fire and rescue unit after their head count finish they also can participate in handling the emergency.		It conforms with the plan.	

4. Summary:

After the fire-fighting drill, a summary meeting was held at New DN plant area. During the meeting, it was concluded that the exercise basically achieved the anticipated and listed the following improvements have been identified in the codes of emergency response etc.



1.1 The Investigation Findings:

1. When the fire was occurred our employees when they reached at the assembly point after that they were informed back at the occurring place.
2. Our firefighter made a fire hoses as well as they connected one fire hydrant post to connect with the fire truck for getting water in to the fire truck, even though that's the hydrant post directly available to spraying water in to the fire post.
3. Our rescue people taken one worker rescue team, but as there were not at proper place it was dangerous to carry the injury person. They call early another method to rescue that's injury person.
4. One fire hydrant valve was found having problem.

4. Recommendation for improvement:

No.	Description of improvement	Find	Remarks
1.	The Bangladesh Fire Service and Civil Defence (BFD) Manusherbandhu (Dhaka) Assistant Director, Head of the committee recommends that suggestions. Firstly, they emphasize about our firefighting team for their emergency response. They did their work better than others organization. Then they issued 3115 message to improve firefighting training and their work skills which will help the handling of any emergency situation. Also he advise all of our employees who work with anyone should have to learn fire vehicle.	Find	Strengthen training and learning for firefighting.
2.	2nd in command, Md. Dawood Hossain (Senior Station Officer) advise us to organize firefighting emergency mock drill with smoke buckets. It's time time to give them training and learning vehicle for our entire employees from Bangladesh Fire Service and Civil Defence. He also thanks to our organization for receiving the certificate as said in Bangladesh Ministry of Firefighting (11) 2 mock training. It will improve our skill knowledge and experience. Mr. Daw agrees with him and he promises later he will talk to the top management personnel regarding this issue to organize more beneficial training for our employees.	Find	Strengthen training and improve from weakness.





ANNEX 13

AMBIENT AIR QUALITY MONITORING STATIONS LOCATIONS

CONTINUOUS AMBIENT AIR QUALITY MONITORING STATIONS Summit Bityara Power Company Ltd.



Figure 01: Location of Continuous Ambient Air Quality Monitoring Station 2 at Cooling Tower



Figure 02: Location of Continuous Ambient Air Quality Monitoring Station 1 at Domestic



Figure 03: Location of Continuous Ambient Air Quality Monitoring Station 3 at Cooling Water Control Room



ANNEX 14
NOISE MONITORING

NOISE MONITORING

Suzlon Education Private Company Ltd.

Noise Monitoring:





SUMMARY OF MINUTES OF MEETING 2018

January 2018

New Issues 新问题		
Issue Discussed 讨论问题	Responsible Department 负责部门	Dead line 期限
<p>Mr. Dai Qiang, EHS Manager, First greeting by him.</p> <p>a) EHS working team aim and plan in 2018: Discuss the EHS working aim and plan in 2018. We want to 0 accidents in this year also</p> <p>b) To sign EHS annual responsibility sheet for 2018, EHS annual responsibility sheet are sign by the General Manager with every department head (Operation, EHS, Mechanical, Electrical & I&C, Admin).</p> <p>c) EHS Summary for 2017: As per contract, we have already achieved ISO certificate, this is good for our company. Now we are going to international Standard. So, we have to maintain always our quality. EHS department and also relevant department, all together efforts come ISO certificate.</p> <p>d) Production Situation 2017: In this year 2017 our production is good condition. This result belongs to, Impact of all employee's effort.</p> <p>e) Safety Condition in 2017: In the year 2017, Safety Condition is 0 accident. This is also goes all credited to the all employees. hey, are working as per condition safety first.</p> <p>f) Praise for safety and environmental protection star employees in 2017: For the safety observation we are praise for safety and environmental protection star employees in 2017. This is awareness for the star employees 2017</p>	EHS	Closed
Mr. Solaiman (Summit EHS Asst. Manager) appreciate to all of our O&M team for organize safety awards system to more appreciate about safety culture. He also thanks for your participation and gain ISO certificate. This is good achievement for the company.	O&M	Closed
Mr. Wei Yimin, Plant Manager, He also thanks for the EHS Activities Day to day it always increases. According to our plan we achieve the ISO certificate. He also thanks summit to be always beside with us. For 2018, our plan is 0 accident. We always want to be safe work and back home safely.	O&M	-



SUMMARY OF MINUTES OF MEETING 2018

(Continue)

March 2018

New Issues 新问题		
Issue Discussed 讨论问题	Responsible Department 负责部门	Dead line 期限
Mr. Dai Qiang, EHS Manager, First greeting by him. a) EHS Situation February and March 2018: Our safety situation is good condition. b) Mr. Dai talking about your vehicle checklist and also need to check and maintenance the check list. Because our all employees are use this vehicle. So, it is essential to maintain the checklist. c) He requires to Mr. Mosharrof for organize audit to them about their vehicle inspection and maintenance schedule.	EHS	Closed Closed 02-04-2018
Mr. Zhu Xuefeng Operation Manager talking about the night shift vehicle. That time driver can drive with his limit but sometimes he does not obey the rules of limit. So driver have to control the limit of speed.	O&M	Closed
Mr. Wang Guangjun, Senior Mech. Engineer, talking about the subcontractor worker. They are good and he proposed that they will need to arrange the training monthly for his worker. It will be good at both sides.	Mach	Closed
Mr. Mosharrof hossain: advise one think regarding PTW system to ensure safety on site it's more essay before the authorized person signature the permit the first visit the working location and make sure they fulfilled all of the requirements which covered by the work permit system.	Shift in change	Next time training PPT will organize in Bangla and English language
Mr. Wei YiminPlan Manager, He want, EHS department will arrange another Permit to work training with PPT Bangla language also. Because lot of worker does not understand English. That time result will be good comes.		Closed



SUMMARY OF MINUTES OF MEETING 2018

(Continue)

May 2018

New Issues 新问题		
Issue Discussed 讨论问题	Responsible Department 负责部门	Dead line 期限
<p>Mr. Dai Qiang, EHS Manager, First greeting by him.</p> <p>a) Production Situation March and April 2018: Our production situation is fairly good condition.</p> <p>b) He also discussed about ERM given findings. Let NEPCS & Summit to take necessary action to rectify problems within June.</p> <p>c) He also mentioned about training subcontractor worker training based on safety issue.</p>	EHS	Closed
<p>Mr. Zhu Xuefeng, Operation Manager talked about their operation off-duty. When the training over operation team has occupied their off-duty. Is there any possibility to make up one day's holiday? This is problem has been put up from last year's October.</p>	Admin	Closed
<p>Mr. Wei Yimin Plant Manager gave thanks to EHS team.</p> <p>a) He talked about subcontractor training to arrange as soon as possible.</p> <p>b) NPEC violates many safety rules and regulation during the working in site. So, EHS team should monitor NEPC work on site. EHS need to inform NEPC to attend monthly safety meeting from now on.</p>		Closed



SUMMARY OF MINUTES OF MEETING 2018

(Continue)

July 2018

New Issues 新问题		
Issue Discussed 讨论问题	Responsible Department 负责部门	Dead line 期限
<p>Mr. Dai Qiang, Andmin & EHS Manager, First greeting by him.</p> <p>a) Production Situation June and July 2018: Our production situation is very much satisfactory. Its good condition.</p> <p>b) Near about 7 audits has been run on July. He also discussed about ERM given findings. Let NEPCS and Summit to take necessary action to rectify problems within end of July.</p> <p>c) He also discussed about our operation production improvement and kitchen improvement, also talking about green plantation for our plant. It is the Quality Objective improvement of our power plant.</p> <p>d) He also discussed about work Permit when Acid/ CO2 loading and unloading time, need to check all thing as per our work permit. Mr. Mohammad Mosharof Hossain and Mr. Suruzzaman will be checking all thing. If they found anything wrong, they will be punished or violation.</p>	EHS	Closed
Mr. Li Linglong, maintenance in charge, talking about the labor issue. Sometimes they cannot come on duty in time. Organize to supply worker on time.	Maintenance	Closed
Mr. Sujit Sutradhar, Operation manager (Summit)-On the rainy season on our plant some places specially on road becomes slippery. So, need to always clean on time.	Admin	Closed
Mr. Suhag, Suhag Enterprise, discuss about labour issues. He told us, if you need labor, just informed us before 2 days.	Admin	Closed
Mr. Mohammad Mosharof Hossain EHS Engineer, discuss about dormitory room accommodation of the worker. Need proper accommodation with the worker for their safety and health issue. He also suggested buying more waste bin as per standard color code.	EHS	Closed
<p>Mr. Wei Yimin Plant Manager gave thanks to EHS team for the good safety performance. Also, thanks Subcontractor and our operation and maintenance team for the June and July have good productions.</p> <p>a) He talked about Pressure Vessel test for our equipment. If our employees take training from government, then we will test our equipment by ourselves.</p>	Admin	Closed



SUMMARY OF MINUTES OF MEETING 2018

(Continue)

September 2018

New Issues 新问题		
Issue Discussed 讨论问题	Responsible Department 负责部门	Dead line 期限
<p>Mr. Mosharof Hossain, EHS Engineer, First greeting by him.</p> <p>a) Production Situation September 2018: Our production situation is very much satisfactory. It's in good condition.</p> <p>b) He also discusses about your HGPI upcoming. Talk with labor supervisor for the upcoming HGPI and also talk river Side on going work</p> <p>c) He also concerns about subcontractor employee's medical fitness check, this time they also add two items with their medical report such as eye and hear condition.</p>	EHS and admin	Closed
Mr. Li Linglong, maintenance in charge, talking about the labor issue. Sometimes when they need labor, that time they are not available on time. Also talk about their proper PPE. Subcontractor They didn't provide proper PPE for their worker.	Maintenance	Closed
Mr. Ujjal, Sr. Chemist- Regarding Chemical PPE is not good. But before when chemical PPE Buy from China, its good quality. But now condition is not good. So, he suggests buying next chemical PPE from china.	Admin	Closed
Bikas Kanti, Doctor-Discuss about one small rack to protect some report and documents. So, he need one small rack(almirah)	Admin	Closed
<p>Mr. Wei Yimin Plant Manager gave thanks to EHS team for the good safety performance, no accident. Also, thanks Subcontractor and our operation and maintenance team for the September have good productions.</p> <p>a) He talked about EHS PPE plan for, HGPI who is the responsible person for this work. He also discusses about our medical examination. Next month's we will find out, if any problem of any report.</p>	Admin	Closed



SUMMARY OF MINUTES OF MEETING 2018

(Continue)

November 2018

New Issues 新问题		
Issue Discussed 讨论问题	Responsible Department 负责部门	Dead line 期限
Mr. Dai Qiang, Admin & EHS Manager, First greeting by him. a. Production Situation this year 2018: Our production situation is stable position. Our power plant is the best power plant of the Bangladesh b. About safety condition is the better from the previous year. c. About implementation, this month ADB inspection and also load testing by 3rd party. d. From next day we have big work. HGPI work is going for the next month. On this time all of employees have to maintain our power plant safety rules. Everyone has to obey the safety rules on that work time. He also discusses about our power plant safety rules, risk identification on site, work permit etc.	EHS	Closed
Mr. Li Linglong, maintenance in charge, talking about the HGPI work. He also advice to follow the safety rules on the work time. And also ensure the work permit before start work	Maintenance	Closed
Mr. Ujjal, Kumar Sr. Chemist- Regarding Chemical PPE residence have only two pieces. He needs more for the emergency time.	Admin	Closed
Zhu Xuefeng, operation Manager discuss about the first aid box bandage. He needs more bandage on the HGPI work time. And also discuss to obey the safety rules of the power plant.	Operation	Closed
Mr. Moshiur, Asst. Manager (SBPCL). He is talking about the GE person ID card, when HGPI work is going on And other thing, GE person need to sign on the work permit when HGPI work going on	EHS	Closed
Mr. Chen Yanhui, I&C and Electrical in charge. We have lost of electrical work on that time. He also advice to follow the safety rules on the work time and also ensure the work permit before start work. And also ensure the equipment safety.	Admin	Closed



ANNEX 16

AAQMS Calibrations Records (December'18 Copy)-AAQMS-2

NEPCS-DEM-FM-PRO-8MT-09

CALIBRATION RECORD

Date of Calibration: 05/12/2018 Last Calibration date of User: 05/11/2018
 ID No. User Instrument: AQMS 2 Title of the User: AQMS 2
 ID No. of Master Instrument: N/A Title of Master: AQMS 98.99%
 Master is Valid up to: N/A Calibration bottle: Calibration bottle

Adjustment of the Master	Findings	Adjustment of User	Findings
Set the desired pressure from the bottle	OK	Ensure there is no leakage in the sample line	OK
Insert the sample line	OK	Let the gas pass in the line until the reading is stable	OK
Ensure there is no leakage	OK	Adjust the system to ensure the reading is zero	OK

Reading by Master	Reading by User	Variance	Comment
SO2-0.000	SO2-0.001	±0.001	OK
NOX-0.000	NO-0.000	±0.000	OK
CO-0.000	CO-0.001	±0.001	OK

Remarks on finding and use:

All values are in Acceptable Range.

The instrument is valid up to:	11/02/2019	Next calibration date:	05/01/2019
Signature:		Date:	05/12/2018



ANNEX 16

AAQMS Calibrations Records (December'18 Copy)-AAQMS-3

NEPCS O&M-F&P-PRO-3017-09

CALIBRATION RECORD

Date of Calibration: 05/12/2018 Last Calibration date of User: 05/11/2018

ID No. User Instrument: AQMS 3 Title of the User: AQMS 3

ID No. of Master Instrument: N/A Title of Master: N/A 99.99%

Master is Valid up to: N/A Calibration code:

Adjustment of the Master	Findings	Adjustment of User	Findings
Set the desired pressure from the bottle	Ok	Ensure there is no leakage in the sample line	Ok
Insert the sample line	Ok	Let the gas pass in the line until the reading is stable	Ok
Ensure there is no leakage	Ok	Adjust the system to ensure the reading is zero	Ok

Reading by Master	Reading by User	Variance	Comment
SO2-0.000	SO2-0.001	±0.001	Ok
NOx-0.000	NO-0.000	±0.000	Ok
CO-0.000	CO-0.000	±0.000	Ok

Remarks on finding and use:

All values are in Acceptable Range

The instrument is valid up to:	11/02/2019	Next calibration date:	05/01/2019
Signature:		Date:	05/12/2018



ANNEX 16

AAQMS Calibrations Records (December'18 Copy)-AAQMS-1

NEPCS-O&M-FM-PRO-MNT-08

CALIBRATION RECORD

Date of Calibration: 05/12/2018 Last Calibration date of User: 05/11/2018

ID No. User Instrument: AQMS 1 Title of the User: AQMS 1

ID No. of Master Instrument: N/A Title of Master: SO2=8.0-8.2PPM

Master is valid up to: N/A NOX=0.02-0.022PPM

CO=0.02-0.021PPM

Adjustment of the Master	Findings	Adjustment of User	Findings
Set the desired pressure from the bottle	Ok	Ensure there is no leakage in the sample line	Ok
Insert the sample line	Ok	Let the gas pass in the line until the reading is stable	Ok
Ensure there is no leakage	Ok	Adjust the system to ensure the reading is zero	Ok

Reading by Master	Reading by User	Variance	Comment
SO2=8.2PPM	SO2=8.150	±0.001	Ok
NOX=0.022PPM	NOX=0.023	±0.001	Ok
CO=0.021PPM	CO=0.023	±0.002	Ok

Remarks on finding and use:

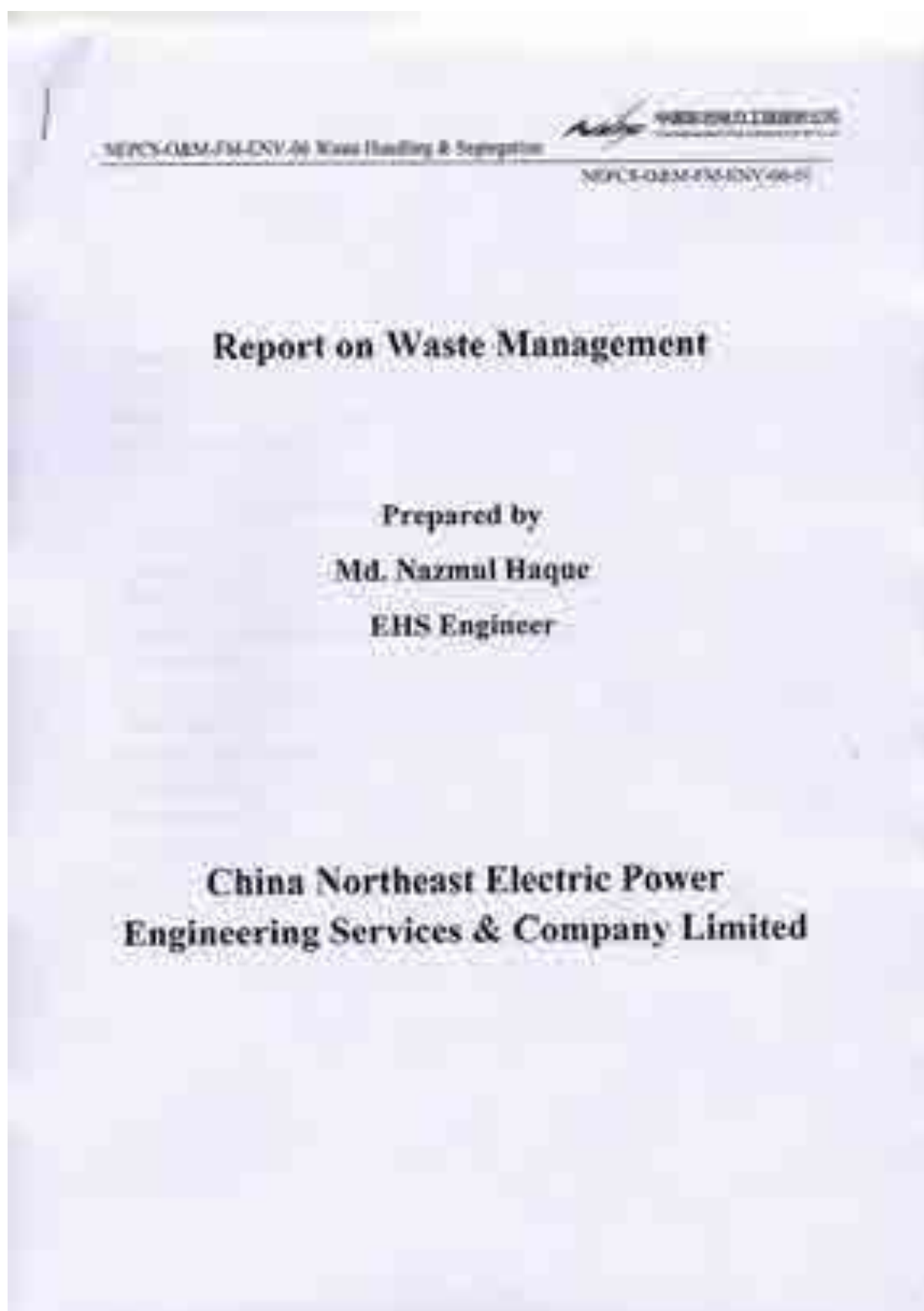
All values are in Acceptable Range

This instrument is valid up to	11/02/2019	Next calibration date	05/01/2019
Signature:	<i>[Signature]</i>	Date	05/12/2018



ANNEX 17

SOLID WASTE MANAGEMENT REPORT





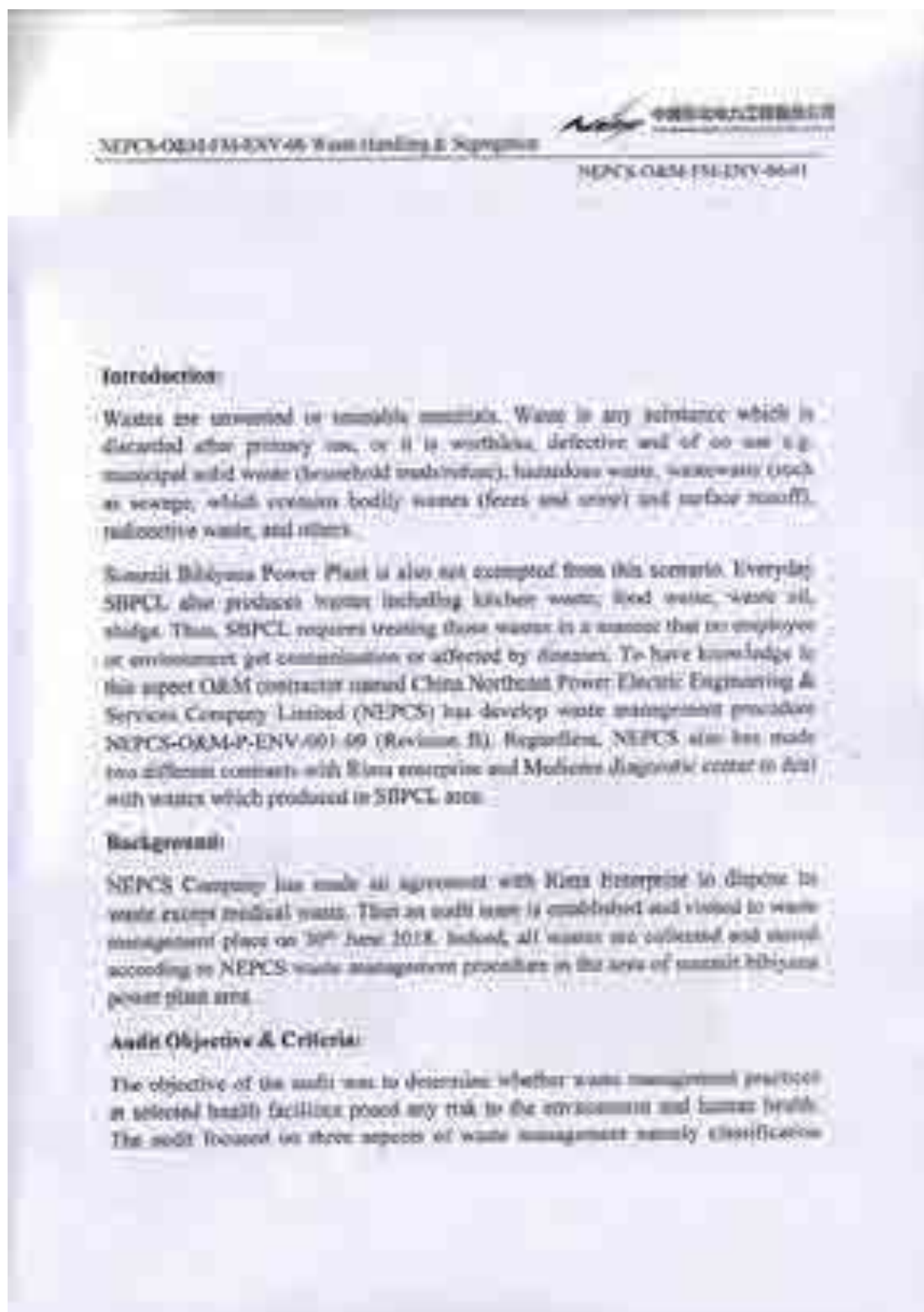
ANNEX 17

SOLID WASTE MANAGEMENT REPORT (Continue)

NEPCO-GAMMA-ENV-01 Waste Handling & Segregation		NEPCO-GAMMA-ENV-00-01
Contents:		
Introduction:		1
Background:		1
Audit Objectives & Criteria:		1
Location:		1
Classification, Segregation and Storage:		1
Classification:		1
Storage:		1
Recommendations:		1
Transportation, Treatment & Disposal:		1
Transportation:		1
Treatment & Disposal of MSW:		1
Recommendations:		1
Occupational Health and Safety:		1
Recommendations:		1
Audit Conclusion:		1
Audit Team:		1



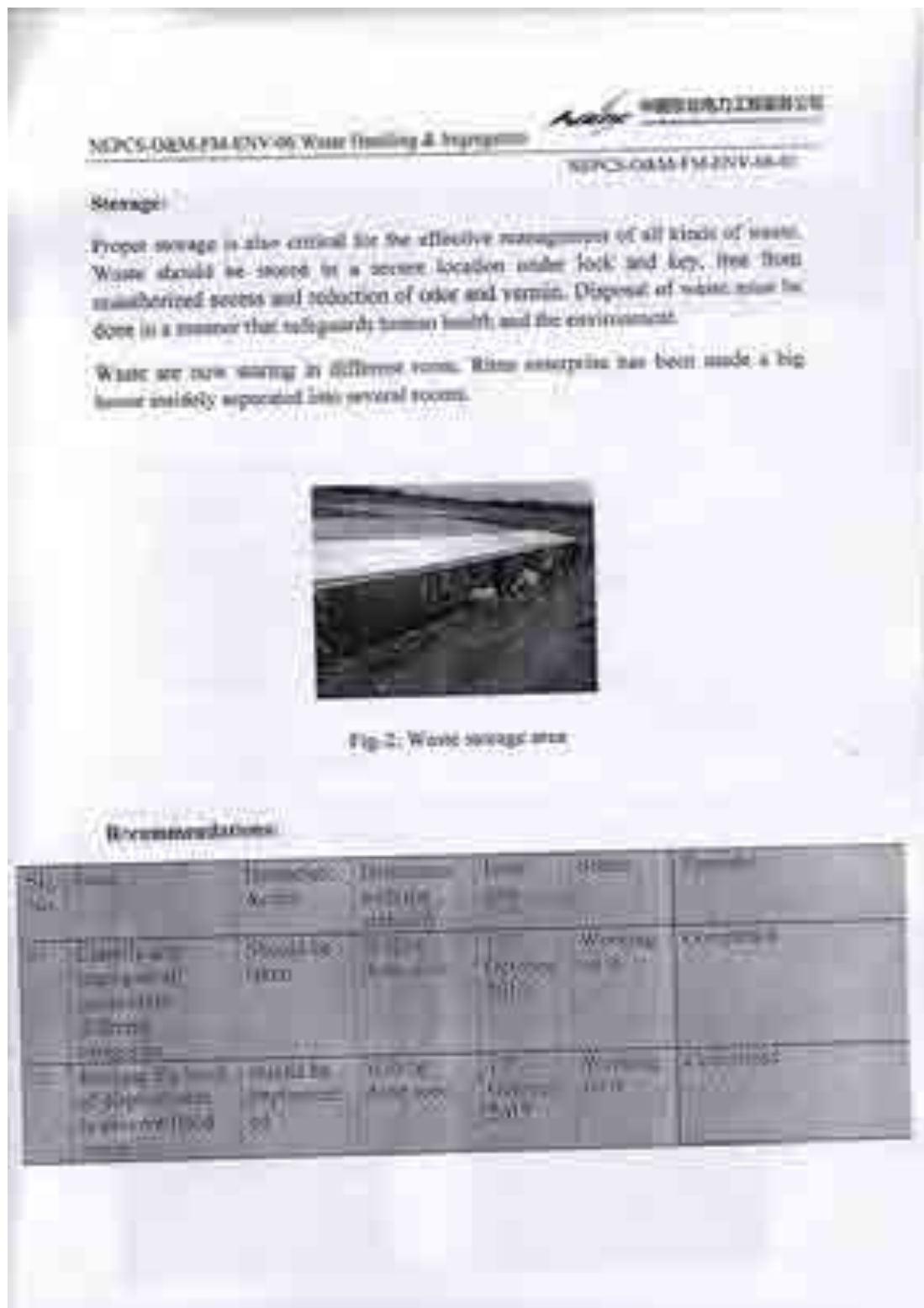
SOLID WASTE MANAGEMENT REPORT (Continue)







SOLID WASTE MANAGEMENT REPORT (Continue)





ANNEX 17

SOLID WASTE MANAGEMENT REPORT (Continue)

SBPCL-O&M-FM-ENV-06 Waste Handling & Transport

SBPCL-O&M-FM-ENV-06-01

Sl. No.	Activity	Frequency	Responsible	Remarks
1	Waste Handling	Daily	Waste Handler	
2	Waste Transport	Weekly	Waste Transporter	

Transportation, Treatment & Disposal

Transportation:

Rima enterprise has engaged a small truck to carry all wastes from plant to the disposal area. So far we have found Rima enterprise personnel are using following PPE:



- ◆ Mask
- ◆ Hand Gloves

Treatment & Disposal at Site:

Rima enterprise is DGE approved for managing waste. It has enough area to dump all wastes. Beside, Rima enterprise has another compound with its incinerator relevant wastes such as oily cloth, waste oil, burned oil etc.

It has larger area to dump plant generation wastes. Audit in June '17 showed that no fence has been installed around the disposal area. Furthermore, indigenous trees have been planted but because of flood or wind many of them have been evicted or fallen down.

Audit in 06th January 2019 showed that all land area completely covered with brick wall.



ANNEX 17

SOLID WASTE MANAGEMENT REPORT (Continue)

NEPCX MEMPHIS-ENV-08 Waste Handling & Disposition

NEPCX-0001-EM-ENV-08-01

Fig-3: Footer

Recommendations:

Item	Initiative	Discussion and Action	Priority	Status	Remarks
1	Supervision	Supervision of waste handling and disposal activities	High	Completed	Completed with no issues
2	Training	Training of staff on waste handling and disposal procedures	Medium	In Progress	Training completed for all staff
3	Waste Handling	Waste handling and disposal activities	High	Completed	Completed with no issues

Occupational Health and Safety:

Under the provision of the Occupational Health and Safety Act, an employer is required to ensure, so far as is reasonably practicable, that risk of accidents or injury to health do not arise as a result of handling dangerous substances. In addition, the employer is required to provide information, training and supervision



ANNEX 17

SOLID WASTE MANAGEMENT REPORT (Continue)

SBPCL Annual E&S Monitoring Report_18

Waste Handling & Storage

SBPCL-08-MJM-ENV-06 Waste Handling & Storage

SBPCL-08-MJM-ENV-06-01

necessary to ensure the protection of his/her employees against risk of accident and injury to health arising from employment. In health facilities the workers at risk include health-care providers, hospital cleaners, maintenance workers, operators of waste treatment equipment, and all personnel involved in waste handling and disposal within and outside health-care establishments. Waste handling training is being conducted by NEPC-S as well as by the Kites enterprise.

Recommendations:

Sr.	Issue	Location	Responsible Party	Time	Status	Remarks
01	Waste handling	Waste handling	Waste handling	01/11/2018	Completed	Completed
02	Waste handling	Waste handling	Waste handling	01/11/2018	Completed	Completed
03	Waste handling	Waste handling	Waste handling	01/11/2018	Completed	Completed

Audit Conclusion:

We concluded that this disposal area is fully lacking of every criteria given by DoE as well as Environment Conservation Act-1995 (Edition-2010). To fulfill the requirement we have suggested Kites enterprise to take action as soon as possible. Kites enterprise has promised to meet above mentioned criteria or suggestions.

Audit Team:

Mr. Dai Qing *Dai Qing*

Md. Nazmul Haque *Nazmul Haque*

Md. Rasheedul Islam *Rasheedul Islam*



ANNEX 18

ILLUMINATION MONITORING RECORDS 2018

ASST		INSPECTION MAINTENANCE HISTORY			
PROJECT MAINTENANCE		INSPECTION MAINTENANCE HISTORY			
TABLE 1: Light Measurement data for		INSPECTION MAINTENANCE HISTORY			
Serial No.	Location	Room Name/No.	Foot Candles (Lux)	Measurement Acceptable Criteria	Remarks
1	CCR & control building First floor	Plant Area, MCC Room	180	700 Lux (working area) 500 Lux (height from ground level)	
		THREAT BATT Room	180		
		SR AR Room	200		
		PCBRT Control Room	240		
		Workshop	200		
		Storage Room	150		
		WC/OT Room	175		
		Tool Room	175		
		Communication Room	150		
		Fire Alarm Control	180		
		Security	200		
2	CCR & control building second floor	Storage Room	200		
		Measurement Office	200		
		HR Office	175		
		Tool Office	200		
		Chemical Laboratory	200		
		Chemical Store Room	175		
		Control Office	200		
		Tool Control Room	200		
3	CCR & control building third floor	CCO Laboratory	200		
		Storage Office 1	150		
		Storage Office 2	150		
		Storage Office 3	175		
		THREAT Office	200		
		SR/AR Room	200		
		Storage Communication Room	200		
4	CCR building 4th floor	Tool Lab	200		
		Engineering Office	200		
		Tool Lab	200		
5	CCR building 5th floor	CCR Room	175		
		SR/AR Room	200		
		Tool Lab	200		
6	CCR building 6th floor	CCR Room	200		
		Tool Lab	200		
7	CCR building 7th floor	CCR Room	200		
		Tool Lab	200		
8	CCR building 8th floor	CCR Room	200		
		Tool Lab	200		
9	CCR building 9th floor	CCR Room	200		
		Tool Lab	200		
10	CCR building 10th floor	CCR Room	200		
		Tool Lab	200		
11	CCR building 11th floor	CCR Room	200		
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		Tool Lab	200		
83	CCR building 83rd floor	CCR Room	200		
		Tool Lab	200		
84	CCR building 84th floor	CCR Room	200		
		Tool Lab	200		
85	CCR building 85th floor	CCR Room	200		
		Tool Lab	200		
86	CCR building 86th floor	CCR Room	200		
		Tool Lab	200		
87	CCR building 87th floor	CCR Room	200		
		Tool Lab	200		
88	CCR building 88th floor	CCR Room	200		
		Tool Lab	200		
89	CCR building 89th floor	CCR Room	200		
		Tool Lab	200		
90	CCR building 90th floor	CCR Room	200		
		Tool Lab	200		
91	CCR building 91st floor	CCR Room	200		
		Tool Lab	200		
92	CCR building 92nd floor	CCR Room	200		
		Tool Lab	200		
93	CCR building 93rd floor	CCR Room	200		
		Tool Lab	200		
94	CCR building 94th floor	CCR Room	200		
		Tool Lab	200		
95	CCR building 95th floor	CCR Room	200		
		Tool Lab	200		
96	CCR building 96th floor	CCR Room	200		
		Tool Lab	200		
97	CCR building 97th floor	CCR Room	200		
		Tool Lab	200		
98	CCR building 98th floor	CCR Room	200		
		Tool Lab	200		
99	CCR building 99th floor	CCR Room	200		
		Tool Lab	200		
100	CCR building 100th floor	CCR Room	200		
		Tool Lab	200		



ILLUMINATION MONITORING RECORDS 2018 (Continue)

80



ANNEX 19

NOISE TEST RESULT 2018 (THIRD PARTY-BV)

Industry & Facilities Division		 SBPCL		<table border="1"> <tr> <td>11</td> <td>Interim</td> </tr> <tr> <td>12</td> <td>Final</td> </tr> </table>		11	Interim	12	Final
11	Interim								
12	Final								
INSPECTION REPORT N° BV/NDP/NSP_11/SEP/18									
BV Job no: BAN.D.415.018.208									
<u>AMBIENT NOISE QUALITY</u>									
<u>Standards</u>									
Dot/ ED standard (dB)		Day		Night					
Industrial area		75		70					
Commercial area		70		60					
Street area		60		50					
Residential area		55		45					
IFC/ WB standard (dB)		Day		Night					
Industrial		70		70					
Residential		55		45					
Institutional		55		45					
Educational		55		45					
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ANNEX 19

NOISE TEST RESULT 2018 (THIRD PARTY-BV)-Continue

Industry & Facilities Division				<input type="checkbox"/> Interim <input checked="" type="checkbox"/> Final	
INSPECTION REPORT N° BV-NEPCS-SH, JUNE '18					
BV Job no: SAN.D.415.010.208					
<u>Workplace Noise Test Results</u>					
1	East side village area	Day	54.11		
		Night	44.50		
2	South side village area	Day	55.31		
		Night	43.41		
3	West side village area	Day	54.71		
		Night	43.17		
4	East side power plant (concrete side RMN)	Day	64.31		
		Night	62.11		
5	East side power plant (concrete near transformer)	Day	64.2		
		Night	63.1		
6	North side boundary corner (Near cooling tower)	Day	71.11		
		Night	70.12		
7	Near 2 no. gate	Day	64.11		
		Night	62.24		
8	Inside of boundary north side (near pump house)	Day	64.22		
		Night	63.72		
9	Inside of boundary west side (near gas station)	Day	60.22		
		Night	65.23		
10	Inside of boundary south side (Near RMN room)	Day	72.11		
		Night	70.12		
11	Between GT and ST	Day	67.11		
		Night	66.78		

SBPCL Ltd
 GMR (P) Ltd

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ANNEX 20

STACK EMISSION TEST RESULT 2018 (THIRD PARTY-BV)

Industry & Facilities Division

DEPARTMENT OF ENVIRONMENT, GOVERNMENT OF PUNJAB

REPORT NO. PWD/2018/00000

Result of the Stack Emission

S.No.	Parameter	Value (mg/m ³)	Permissible Limit	Result	Comment
1	SO ₂	1.40	100	Pass	Acceptable
2	NO _x	1.00 (1.20 mg/m ³)	100	Pass	Acceptable
3	CO	1.00	100	Pass	Acceptable
4	PM ₁₀	1.00 (1.20 mg/m ³)	100	Pass	Acceptable
5	PM _{2.5}	1.00	100	Pass	Acceptable
6	PM _{10-2.5}	1.00	100	Pass	Acceptable
7	Temperature	100	100	Pass	Acceptable

Signature: _____

Date: _____

Stamp: _____



ANNEX 21

RIVER WATER TEMPERATURE MONITORING RECORDS 2018 BY NEPCS

MONTH	AT DISCHARGE POINT, °C	AT RIVER WATER MIXING POINT, °C	AT 50 M UPSTREAM, °C	AT 50 M DOWNSTREAM, °C
January*	21.28	21.18	19.29	19.15
February*	11.53	11.49	16.48	14.61
March*	20.55	19.84	20.67	18.27
April*	21.21	20.47	21.35	19.46
May*	26.94	26.03	26.65	25.53
June*	27.22	NA**	NA**	NA**
July*	27.39	NA**	NA**	NA**
August*	31.25	32.47	30.53	34.35
September	29.51	28.24	28.14	28.18
October	29.30	28.19	28.06	28.09
November	29.22	28.14	28.08	28.09
December	29.03	28.06	28.10	28.05

Note:

*River Water temperature during January'18-August'18 was usually conducted through temperature Gun. For this reason, some erroneous data were found in the river side. After That on September 2018, NEPC-S started using mercury thermometer to ensure the exact values of river water temperature.

* **NA means data not available due to flooded.