



Environmental Monitoring Report

Project Number: 42265-023
February 2019

Period: July 2018 – December 2018

IND: Assam Urban Infrastructure Investment Program - Tranche 1

Submitted by

Guwahati Development Department and Urban Development Department, Government of Assam

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

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ASSAM URBAN INFRASTRUCTURE INVESTMENT PROGRAM

::: PROJECT IMPLEMENTATION UNIT (PIU) :::

3rd Floor, Tripti Tower, Ganeshguri, Guwahati, Assam-781005

Tel. No. +91 70860 80108, Website: <http://www.auiip.nic.in>

Email: pmu.auiip@gmail.com (Project Director), piu.auiip@gmail.com (PIU, Guwahati)



No. ADB/AUIIP/IEE/178/2016/190

Date: 04.02.2019

From,

The Project Director,

Assam Urban Infrastructure Investment Program

Ganeshguri, Guwahati-05

To,

The Country Director,

India Resident Mission

Asian Development Bank.



Sub: **Submission of Semi Annual Environmental Monitoring Report for the period July – December 2018.**

Dear Sir,

With reference to the subject cited above, the Semi Annual Environmental Monitoring Report for the period July – December 2018 for packages (i) AUIIP/PR-1/GUW/WS/01 (ii) AUIIP/PR-1/GUW/WS-02A & 2B and (iii) AUIIP/PR-1/DIB/SWM/01A & (iv) AUIIP/PR-1/DIB/SWM/01B are enclosed herewith for your review and comments

This is for favour of your kind information.

Encl.: As Stated Above

Yours Faithfully,

[Handwritten Signature]
04/02/19

Project Director,

Assam Urban Infrastructure Investment Program

Project Director

Assam Urban Infrastructure Investment Program
Ganeshguri, Guwahati-5



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Semi-Annual Environmental Monitoring Report

ADB Loan Number 2806-IND

Period Covered: July to December 2018

IND: Assam Urban Assam Urban Infrastructure Investment Program – Tranche 1

February 2019

Prepared by Guwahati Development Department and Urban Development Department,
Government of Assam for Asian Development Bank

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ABBREVIATIONS

ADB	-	Asian Development Bank
AUIIP	-	Assam Urban Infrastructure Investment Program
APCB	-	Assam Pollution Control Board
AUWSSB	-	Assam Urban Water Supply and Sanitary Board
CTE	-	Consent to Establish
CTO	-	Consent to Operate
DFO	-	Divisional Forest Officer
DMB	-	Dibrugarh Municipal Board
DMSC	-	Design Management and Supervision Consultant
DSC	-	Design & Supervision Consultant
DTP	-	Dibrugarh Town Protection
EARF	-	Environmental Assessment and Review Framework
EC	-	Environmental Clearance
EIA	-	Environmental Impact Assessment
EM	-	Environment Monitoring
EMP	-	Environmental Management Plan
GDD	-	Guwahati Development Department
GMC	-	Guwahati Municipal Corporation
GMDA	-	Guwahati Metropolitan Development Authority
GRM	-	Grievance Redress Mechanism
IEC	-	Information, Education and Communication
IEE	-	Initial Environmental Examination
LOA	-	Letter of Acceptance
LOI	-	Letter of Intent
MFF	-	Multi Tranche Financing Facility
NABET	-	National Accreditation Board for Education and Training
NOC	-	No Objection Certificate
NTP	-	Notice to Proceed
PD	-	Project Director, AUIIP
PHED	-	Public Health Engineering Department
PIU	-	Project Implementation Unit
PMC	-	Project Management Consultants
PMU	-	Project Management Unit
PPMS	-	Project Performance Monitoring System
PSO	-	Project Support Office, Guwahati
PUC	-	Pollution Under Control
SPPTS	-	Support project program and Technical Assistance
SPS	-	Safeguards Policy Statement, 2009
STP	-	Sewage Treatment Plant
SWM	-	Solid Waste Management
TL	-	Team Leader
TOR	-	Terms of Reference
DTL	-	Dy. Team Leader
UDD	-	Urban Development Department
WO	-	Work Order
WTP	-	Water Treatment Plant

I. INTRODUCTION

A. OVERALL PROJECT DESCRIPTION

1. Asian Development Bank (ADB) has approved the Assam Urban Infrastructure Investment Program (AUIIP), a \$200 million Multi-Tranche Financing Facility (MFF) on 20th September 2011, to improve water supply of South Guwahati East Zone¹ as well as drainage and solid waste management (SWM) of Dibrugarh.² AUIIP will also provide support for ongoing urban reforms and associated capacity development for improved service delivery, urban governance and financial management in Guwahati and Dibrugarh. Loan 2806-IND: AUIIP-Tranche 1 for \$81 million was approved on 18 November 2011, signed on 9 March 2012 and declared effective on 25 April 2012. In March 2014, \$20 million and in September 2016, \$10 million of Tranche 1 was cancelled and reallocated to the MFF pool. Tranche 1 now stands at \$51 million. The original loan closing date was 30 June 2018. The loan closing date has been extended till 29 June 2021, the MFF closing date.
2. The Tranche 1 contains three sub-projects which are (i) Water Supply System in South East Guwahati (ii) Storm Water drainage in Dibrugarh and (iii) Solid Waste Management in Dibrugarh.
3. The executing agency is Guwahati Development Department (GDD). The Project Management Unit (PMU) in Guwahati and respective Project Implementation Units (PIUs) have been established in Guwahati and Dibrugarh. Initially, Project Management Consultants (PMC) and Design and Supervision Consultants (DSC) were mobilized under Tranche 1 to assist the PMU and PIUs. However, in the third quarter of 2016, the PMC had withdrawn their services from AUIIP and DSC's contract was lapsed on 30th May 2018 after extension of their contract for three months. In the month of October 2018, GKW Consult GmbH in association with Vision EIS Consulting Pvt. Ltd. has been awarded the contract for the Design, Management and Supervision Consultancy (DMSC).
4. The primary objective of the program is to formulate and implement a roadmap that helps national and state-level targets for water supply in Guwahati and storm water drainage and SWM Dibrugarh.
5. **Outputs of the Project:** The major key outputs are as follows:
 - Improvement water supply infrastructure in Guwahati improved SWM infrastructure in Dibrugarh
 - Improved drainage in Dibrugarh and Guwahati
 - Enhanced capacity building
6. **Outcomes:**
 - Improved access to Urban infrastructure
 - Reduced flooding
 - Environmental sustainability
 - Gender main streaming

¹Guwahati has been divided into four water supply zones; one north of the Brahmaputra river and three to the south. In south Guwahati, the west zone is being financed under Jawaharlal Nehru National Renewal Mission (JNNURM), the central zone by Japan International Cooperation Agency (JICA), and the east zone has been identified for ADB assistance.

²Dibrugarh suffers from prolonged local flooding during the annual monsoon. Because of the lack of sewerage and inadequate solid waste management much of the areas in the city's drainage system becomes choked and severely polluted with untreated wastewater.

B. BACKGROUND AND CONTEXT OF THE REPORT

7. **Environmental Categorization:** AUHIP Tranche 1 projects have been categorized as ADB Category B for environment as per ADB Safeguard Policy (SPS 2009), and accordingly Initial Environmental Examination (IEE) reports were prepared and were approved by the ADB.

8. Environmental Monitoring Plans (EMP) which addresses the potential impacts and risks identified by respective environmental assessments of each sub-project are included in the IEE reports. The level of complexity of the EMPs and the priority of the identified measures and actions commensurate with the sub projects' impact and risks. The EMPs are a part of bidding and contract documents

9. The Semi Annual Environmental Monitoring Report presents the status of sub project implementation, details of compliance with environmental regulations of the Government and policies of ADB, details of compliance with environmental loan covenants, details of complaints received and their redressal and the status of compliance with various aspects of EMP as stated in the IEE reports.

10. This report consists of the following content:

- Status of Subprojects;
- Compliance of Safeguard Loan Covenants;
- Implementation Arrangement;
- Environmental Legal Requirement;
- Compliance with Environmental Legal Requirements;
- Compliance status with the environmental management and monitoring plan;
- Environmental monitoring and evaluation;
- Consultations and disclosures conducted;
- Grievance redress mechanism;
- Findings and recommendations;
- Annexure

C. ENVIRONMENT PERFORMANCE INDICATORS, IF ANY

11. For effective monitoring, selected environmental parameters have been identified as indicators which may be qualitatively and quantitatively measured and compared over a period of time in order to assess/ ensure the compliance to the Environmental Management Plans (EMPs) of each subproject. The environmental performance indicators selected are physical, biological and social characteristics identified as most important in affecting the environment at critical locations all along the sub project corridors. The parameters identified as performance indicators are:

- ✓ Compliance with environmental management and monitoring plan;
- ✓ Compliance to State/ National environmental regulations; and
- ✓ Monitoring of ambient air quality, water quality and noise levels and comparison with baseline environmental quality and State/ National Standards.

II. IMPLEMENTATION PROGRESS

A. STATUS OF SUBPROJECTS PROJECT 1

12. The Tranche 1 contains three sub-projects which are (i) Water Supply System in South East Guwahati (ii) Storm Water drainage in Dibrugarh and (iii) Solid Waste Management in Dibrugarh. **Table 1** shows the subprojects under Tranche 1 and the works packages including the status of award of contracts as of 31st December 2018.

13. The package involving construction of 6 storage reservoirs and allied works in Guwahati; and another package involving construction of transmission main pipelines and allied works for water supply project in Guwahati, awarded earlier had to be terminated in December 2015 due to non performance of the contractor. The terminated contracts were repackaged into three packages and were re-bid. Following which, Shivam Transcon Pvt. Ltd. was engaged in August 2016 for construction of water reservoirs and Tirupati Cement Products was engaged in October 2016 for the construction of clear water transmission mains pipeline and allied works.

14. The contract for 'design, build and operation of intake works, raw water rising main, water treatment plant, clear water pumping stations and allied works in Guwahati' was proposed to be covered under Tranche 2. However, as per discussion held with ADB and higher authority of Govt. of Assam during ADB's Mission (18th- 21st April 2018), it was proposed to restructure this package by splitting it into 2 to 3 smaller packages since the whole contract is unlikely to be completed as a single package within the existing MFF closing date.

15. The contract for the construction of DTP drain box culverts and allied works chainage 0 to 9.5 km in Dibrugarh was awarded in 2014 and the project completion date was May 2017. The contractor (M/s Corsan Corvium Construcccion S.A.) applied for EOT which was not accepted. In the meanwhile the contractor filed bankruptcy. The portion of work from chainage 3.6 km to 9.5 km is proposed to be awarded to the sub-contractor as per sub contracting agreement with the mother contractor and the balance portion from chainage 0km to 3.6 km will be re-bid. The secondary drainage and outfall for Dibrugarh DTP was awarded in Oct 2016 to M/s Gannon Dunkerly & Co and the loan amount for this contract is not yet approved by ADB. However, the work is likely to be started by Q1 of 2019.

16. The Solid waste management (SWM) sub-project in Dibrugarh has three packages which are (i) The construction of Compound Wall for SWM: the contract is awarded to M/S Badri Rai and Co. in June 2017; (ii) Design build 100 MT Solid Waste Compost Plant & 60 MT Sanitary Landfill site: the contract is awarded to M/s Milan Dutta-Blackberry Overseas Pvt. Ltd and Alfa Therma (JV) in April 2017; and (iii) Procurement of equipment/transportation for primary and secondary collection system : shortly the tender to be floated for rebidding.. The Environment clearance has been obtained for SWM landfill site for Dibrugarh.

17. Physical Progress of the sub-projects awarded under **Tranche 1** is shown in **Table 2**. **Appendix 1** shows photographic illustration of different packages under implementation.

Table 1: Status of Sub-project Awarded/Implementation under Tranche 1

Town	Package No.	Components	Status- upto December 2018
2. Water Supply System Subproject			
Guwahati	AUIIP/PR-1/GUW/WS-01	Construction of transmission water supply pipelines and allied works in Guwahati	Due to poor performance of the Contractor M/S. IVRCL, contract was terminated on 07.12.2015 for fresh bid.

Town	Package No.	Components	Status- upto December 2018
		<ul style="list-style-type: none"> • Laying of 19.290 km length of mild steel pipe line of nominal internal diameter ranging from 1300mm to 800mm • Laying of 4.990 km length of gravity pipe line of ductile iron (Class K-9) of 500mm – 700 mm internal diameter. • Locations- Water treatment plant to Gopal Nagar, then connecting all reservoirs 	<p>LOA issued to M/S Tirupati Cement Products on 30.08.2016.</p> <p>Award of Contract: 01.10.2016</p> <p>NTP issued: 04.10.2016</p> <p>Time of completion: 730 days from the date of issuance of NTP.</p> <p>Target completion of work by 01.10.2018.</p> <p>Extension of contract upto 28.02.2019</p>
Guwahati	AUIIP/PR-1/GUW/WS-02A	<p>Construction of storage reservoirs of various capacities at three locations (Gopal Nagar, NorthJyoti Nagar and Kenduguri), approach road and allied works in South East Guwahati Water Supply Project.</p> <p><u>Details: Locations</u></p> <p>Reservoirs:</p> <ul style="list-style-type: none"> ➤ Gopal Nagar – 17 Million Litter (ML) ➤ North Jyotinagar- 3.2 ML ➤ Kenduguri- 3.6 ML <p>Approach road:</p> <ul style="list-style-type: none"> ▪ Gopal Nagar – 460 m ▪ North Jyotinagar- 530 m ▪ Kenduguri-650 m 	<p>Due to poor performance of the Contractor M/S. IVRCL, contract was terminated on 07.12.2015 for fresh bid. New bidding invitation completed.</p> <p>LOA issued to M/s. Shivam Transcon Pvt. Ltd. on 05.05.2016</p> <p>Award of Contract:08.06.2016</p> <p>NTP issued: 06.08.2016</p> <p>Time of completion: 900 days from the date of issuance of NTP.</p> <p>Target completion of work by 28.01.2019</p>
Guwahati	AUIIP/PR-/GUW/WS-02B	<p>Construction of storage reservoirs of various capacities at three locations (Basistha, Hengrabari and Nabajyoti Nagar), approach</p>	<p>Due to poor performance of the Contractor M/S. IVRCL, contract was terminated on 07.12.2015 for fresh bid. IFB was floated on 17 December 2015.</p>

Town	Package No.	Components	Status- upto December 2018
		<p>road and allied works in South East Guwahati Water Supply Project.</p> <p><u>Details: Locations</u></p> <p>Reservoirs:</p> <ul style="list-style-type: none"> ➤ Hengrabari)- 13 ML ➤ Nabajyoti Nagar Main Zone Reservoir- 3.2 ML ➤ Basistha- 5 ML <p>Approach road:</p> <ul style="list-style-type: none"> ▪ Hengrabari-170 m ▪ Nabajyoti Nagar- 855 m ▪ Basistha- 150 m 	<p>LOA issued to M/s. Shivam Transcon Pvt. Ltd. on 30.08.2016.</p> <p>Award of Contract: 1.10.2016</p> <p>NTP issued: 04.10.2016</p> <p>Time of completion: 900 days from the date of issuance of NTP.</p> <p>Target completion of work was by March 2019. However, the contract packages for 3 reservoirs in Hengrabari, Nabajyotinagar and Basistha has been terminated, as the contractor failed to initiate any works at site since NTP. Contract terminated under litigation.</p> <p>Reservoir: The original reservoir site of Basistha had to be abandoned due to objection from the students of the Government Art College, Basistha as they are occupying the part of the government land allotted to AUHIP. A new site has been identified nearby the land of which belong to Panchakanya Dham Trust and the Board of Trustees volunteered to provide required land for the reservoir and approach road.</p>
2. Storm water Drainage Subproject			
Dibrugarh	AUHIP/PR-1/DIB/DR-01	Construction of Reinforced cement concrete RCC DTP drain, widening of culverts and allied works in Dibrugarh from chainage 0 to 9500 m	<p>Contract Agreement was signed on 20.02.2014 and NTP was issued on 25.03.2014.</p> <p>The contractor had applied for EOT since the contract was expired on 23.05.2017. However, the request was not approved by the Govt. of Assam and in the meantime the contractor was bankrupt.</p> <p>Contractor & Sub contractor have left the work abandoned. No physical progress since 11th June 2017.</p> <p>The contract will be rebid.</p>

Town	Package No.	Components	Status- upto December 2018
3. Solid Waste Management Subproject			
Dibrugarh	AUIIP/PR-1/DIB/SWM-01A	Construction of Compound wall, River Protection Wall, Access Roads, Security Guard Room and Allied Works of Landfill site at Dibrugarh	<ul style="list-style-type: none"> ● LOA issued to M/S Badri Rai and Co. on 07.11.2017 ● Award of Contract: 23.06.2017 ● NTP issued: 08.11.2017 ● Time of completion: 730 days from the date of issuance of NTP ● Currently work is under progress
Dibrugarh	AUIIP/PR-1/DIB/SWM-01B	Design Build of 100 MT processing plant and 60 MT sanitary land fill site and allied works at Dibrugarh	The contract was awarded to M/s Milan Dutta-Blackberry Overseas Pvt. Ltd-Alfa Therm Ltd JV on 19.04.2017. NTP was issued on 21.08.2017 and currently work is under progress.
Dibrugarh	AUIIP/PR-1/DIB/SWM-02	Procurement of equipment for primary, secondary collection and transportation Vehicles for Municipal Solid Waste Management at Dibrugarh	Under re-bidding stage

Table 2: Physical Progress of the sub-projects awarded under Tranche 1

Sl. No.	Component of the Project & Package Ref No.	Name of the Contractor	Contract value	Starting date of Implementation	Schedule date of completion (Extended date of completion)	Contract period in months/days	Work completed till 31 st December 2018	Cumulative Physical progress (%) as on 31.12.2018
1.	Constriction of Water supply, Transmission Main Pipelines and allied work in Guwahati-AUIIP/PR-1/GUW/WS/01	M/s. Tirupati Cement Products	78.99 Crore	Award of Contract: 01.10.2016 NTP issued: 04.10.2016	Target completion of work by 01.10.2018 (Extension of contract upto 28.02.2018).	730 days Or 24 months	<ul style="list-style-type: none"> • Gap Piece connection work at Railway Crossing refinery in progress. • Gap Piece Connection work at OIL Crossing Borbari in progress. • Pushing of 1500 mm Dia casing pipe started at Narengi. • Pit Excavation work for Jack pushing work at six mile in progress. • Road and Drain cleaning work at Sunchali is in progress 	58.12
2.	Construction of storage reservoirs of various capacities at three locations (Gopal	M/s. Shivam Transcon Pvt Ltd.	37.11 Crore	Award of Contract:08.06.2016 NTP issued: 06.08.2016	Target completion of work by 28.01.2019	900 days Or 30 months	<p>Gopal Nagar:</p> <ul style="list-style-type: none"> • Stair case drawing stands issued by DMSC. • 1st lift of M-30 	46.97%

Sl. No.	Component of the Project & Package Ref No.	Name of the Contractor	Contract value	Starting date of Implementation	Schedule date of completion (Extended date of completion)	Contract period in months/days	Work completed till 31 st December 2018	Cumulative Physical progress (%) as on 31.12.2018
	Nagar, NorthJyoti Nagar and Kenduguri), approach road and allied works in South East Guwahati Water Supply Project. - AUIIP/PR-1/GUW/WS/02A						<p>Grade concrete of retaining wall (Extended Portion) Completed.</p> <ul style="list-style-type: none"> • Slope Preparation for Stone Pitching (LHS) behind Retaining wall completed. • Bar Binding of 2nd Lift for Retaining wall (Extended Portion) in progress. • Cleaning of Reservoir (Part C) inner side in progress <p>Kenduguri:</p> <ul style="list-style-type: none"> • Plastering of internal wall of the tank in progress. • Casting of Hand Rail post. 	

Sl. No.	Component of the Project & Package Ref No.	Name of the Contractor	Contract value	Starting date of Implementation	Schedule date of completion (Extended date of completion)	Contract period in months/days	Work completed till 31 st December 2018	Cumulative Physical progress (%) as on 31.12.2018
							North Jyoti Nagar: • Excavation of soil for tank construction is completed	
3.	Construction of storage reservoirs of various capacities at three locations (Basistha, Hengrabari and Nabajyoti Nagar), approach road and allied works in South East Guwahati Water Supply Project. - AUIP/PR-1/GUW/WS/02B	M/s. Shivam Transcon Pvt Ltd.	30.80 Crore	Award of Contract: 1.10.2016 NTP issued: 04.10.2016	Target completion of work was by March 2019. However, the contract packages for 3 reservoirs in Hengrabari, Nabajyotinagar and Basistha has been terminated recently, as the contractor failed to initiate any works at site since NTP. Contract terminated under	900 days Or 30 months	Contract terminated and is under litigation. • Basistha Reservoir: An alternate piece of land at Panchakanya hill was identified and spared by Panchakanya Dham Trust as land allotment process at Govt. Art College, Basistha was turned down. CO, Dispur has submitted the original land reports in connection to the formal proposal to DC, Kamrup (M)	Termination notice has been issued to the contractor on 16.12.2017 and Dispute Board is in progress with two hearings.

Sl. No.	Component of the Project & Package Ref No.	Name of the Contractor	Contract value	Starting date of Implementation	Schedule date of completion (Extended date of completion)	Contract period in months/days	Work completed till 31 st December 2018	Cumulative Physical progress (%)as on 31.12.2018
					litigation.		<p>as asked for to process further. The DC's office has asked CO, Dispur to clarify the initial Dag No. i.e. 14(0)/20(N) in terms of new Dag No 140 as forwarded in land proposal. The clarification is awaited from CO, Dispur.</p> <ul style="list-style-type: none"> • Hengrabari Reservoir: Fencing work for the damaged portions is completed. Further construction work can be carried out on rebidding. Demarcation of land allotted by revenue department needs to be done 	

Sl. No.	Component of the Project & Package Ref No.	Name of the Contractor	Contract value	Starting date of Implementation	Schedule date of completion (Extended date of completion)	Contract period in months/days	Work completed till 31 st December 2018	Cumulative Physical progress (%) as on 31.12.2018
							<ul style="list-style-type: none"> • Nabajyoti Nagar Reservoir: Fencing work completed. Further construction work can be carried out on rebidding. 	
4.	Construction of DTP Drain- AUIIP/PR-1/DIB/DR/01	M/s. Corsan Corvium Construction S.A	169.89 Crore	Contract Agreement: 20.02.2014 NTP issued: 25.03.2014.	-	1095 days Or 36 months	Contractor & Sub contractor have left the work abandoned. No physical progress since 11th June 2017. The contract will be rebid.	13.41% - Upto June 2017
5.	Construction of Compound Wall, River Protection etc.- AUIIP/PR-1/DIB/SWM/01A	M/S Badri Rai and Co.	12.02 Crore	Award of Contract: 23.06.2017 NTP issued: 08.11.2017	08.11.2019	730 days Or 24 months	<ul style="list-style-type: none"> • Earth filling for embankment is in progress. • Footing and casting of column and beam of Boundary wall work is in process 	22.16%

Sl. No.	Component of the Project & Package Ref No.	Name of the Contractor	Contract value	Starting date of Implementation	Schedule date of completion (Extended date of completion)	Contract period in months/days	Work completed till 31 st December 2018	Cumulative Physical progress (%) as on 31.12.2018
6.	Design Build 100 MT compost plant with 60 MT sanitary landfill site- AUJIP/PR-1/DIB/SWM/01B	M/S Milan Dutta-Blackberry Overseas Pvt. Ltd and Alfa Therma	29.25 crore	Contract Agreement: 19.04.2017. NTP was issued on 21.08.2017	24/09/2019	750 days Or 25 months	<ul style="list-style-type: none"> • Earthwork filling in progress. • Column concreting and footing of Garage cum Workshop is in progress. • GSB below PCC Completed. • RCC in foundation for R/W pile work in progress. 	20.57%
7.	Procurement of goods and equipment- AUJIP/PR-1/DIB/SWM/02	--	7.84 Crore	The tender was floated on 18.01.2018 for re-bidding the contract and evaluation is under process.	The targeted award of the contract is Q2 of 2019	365 days Or 12 months	-	-

B. IMPLEMENTATION ARRANGEMENT

18. The Government of Assam's GDD is the executing agency. PMU has been established to manage AUIP through PIUs, one each in Guwahati and Dibrugarh. The PMU functions as the implementing agency for project administration and coordination and monitor all the project implementation activities with a focus on performance and achievement of results. PMU reports to the Empowered Committee (the Committee) of the Government of Assam headed by the Chief Secretary, who is responsible for the project results on behalf of Government of Assam. The PIUs are responsible for the day-to-day activities of project implementation in the field and will be under the direct administrative control of the PMU. **Table 3** shows the contact details of the PMU and PIUs.

Table 3: Details of AUIP PMU and PIUs

Designation	Name and Contact Details
PMU, Project Director	Name: 1. Dr. Siddharth Singh, IAS (19.06.2018 -12.12.2018) 2. Mr. Vinod Seshan, IAS (12.12.2018 – continued) Office Address: Tripti Towers, 3 rd Floor, Ganeshguri, Guwahati-781005 Phone: 0361-2529839, Email : pmu.auiip@gmail.com
PIU Guwahati, Additional Project Manager	Name: Mr. Dimbeswar Baruah Office Address: Tripti Towers, 3 rd Floor, Ganeshguri, Guwahati-781005 Phone: 0361-2529839, Email: piu.auiip@gmail.com
PIU Dibrugarh, Additional Project Manager	Name: Bhim B Chetri, <i>Discontinued. Post vacant</i> Office Address: 2nd floor, Aditya complex, Opp. Nova Furniture, K.C. Gogol Path, Khaliamary, Dibrugarh Phone: 9864076272, Email: piu.dibrugarh@gmail.com

19. The Safeguards implementation Arrangement of AUIP includes a full-time Environmental Safeguard Officer in PMU and respective Safeguard Compliance & Monitoring Officers in the two PIUs. **Figure 1** shows the AUIP Safeguards Implementation Arrangement

Figure 1: AUIP Safeguards Implementation Arrangement



20. DMSC assists the PIUs and PMU and has engaged an Environment Specialist who visits the project sites periodically. **Table 4** shows the details of the environmental safeguards team.

Table 4: Details of AUIP Environmental Safeguard Team

Designation	Name and Contact Details
PMU Guwahati, Environmental Safeguard Officer	Name: Mrs Deena Baruah Office Address: Tripti Towers,3 rd Floor, Ganeshguri, Guwahati-781005 Phone:9711099413 Email:.deena0112@gmail.com
PIU Dibrugarh, Safeguard and Compliance Officer	Name: Mrs Meenakshi Baruah Office Address: 2nd floor, Aditya complex, Opp. Nova Furniture, K.C. Gogol Path, Khaliarmy, Dibrugarh Phone:09435070575 Email: piu.dibrugarh@gmail.com
DMSC, Environmental Specialist	Name: Dr. Ardhendu Mitra & Mr. Partho Sarathi Mukherjee Office Address: Tripti Towers,4 th Floor, Ganeshguri, Guwahati-781005 Phone: 9830415953, 7003881499 Email: ardhendumitra@gmail.com , parthosarathi05@rediffmail.com

III. ENVIRONMENTAL ASSESSEMENT AND REVIEW PROCEDURE**A. ENVIRONMENTAL LEGAL REQUIREMENT**

21. The following Regulations detailed in **Table 5** are currently in force in India that deals with environmental issues that could apply to infrastructure development.

Table 5: Environmental Legal Requirements Applicable to AUIP Tranche 1

Component	Applicable Legislation	Compliance	Action Required for AUIP Tranche 1 Subprojects
1. All components that require acquisition of forest land	Forest (Conservation) Act 1980; Wildlife (protection) Act 1972	Approval from State Principal Chief Conservator of Forest and Ministry of Environment, Forests and Climate change, Government of India	Tree felling permission
2. Water Treatment Plant (WTP) – Surface water and Sewage Treatment Plant (STP)	Water (Prevention and Control of Pollution) Act 1974	Consent to Establish (CTE) and Consent to Operate (CTO) from Assam Pollution Control Board (APCB), Government of Assam.	Based on project review and site inspection, APCB provides CTE before construction, and stipulates the disposal standards to be met during operation. After completion of construction, CTO is issued confirming compliance with the CTE conditions, if any
		Renewal of CTO during operation of WTP and STP	Based on the performance of the WTP and its compliance with the disposal standards CTO to be renewed every year.

Component	Applicable Legislation	Compliance	Action Required for AUIP Tranche 1 Subprojects
3. All composting and landfill facilities	Municipal Solid Wastes (Management and handling) Rules 2000	Authorization of proposed site by APCB	Authorization to be issued based on land use in and around the site and groundwater condition.
4. Waste management facilities including composting, landfills and transfer stations	Environment (Protection) Act 1986: EIA Notification 2006, amended in 2009 Category B	Requires environmental clearance from State Environment Impact Assessment Authority (SEIAA)	Based on preliminary information and site visits, project will be categorized as B1 or B2. B1 projects require EIA study for approval.
5. Environmental Clearance for excavation and transportation of earth	EIA notification 2006 and its subsequent amendments issued under Environment Protection Act, 1986	Requires environmental clearance from District Environment Impact Assessment Authority (DEIAA)	Requisite Permission already obtained and to be renewed timely.
6. Earth cutting and transportation to WTP	Assam Minor Mineral Concession Rules, 2013	Permission from the District Magistrate; Kamrup Metropolitan	Requisite Permission is already obtained and to be renewed.

B. COMPLIANCE WITH ENVIRONMENTAL LEGAL REQUIREMENT

22. The following Table shows the regulatory requirements of subproject/components under Tranche-1 and the present status of compliance. Under Tranche 1, the four packages i.e. (i) Construction of Water supply Transmission Main Pipelines and allied work in Guwahati (AUIP/PR-1/GUW/WS/01), (ii) Construction of storage reservoirs of various capacities at three locations (Gopal Nagar, NorthJyoti Nagar, Kenduguri), approach road and allied works in South East Guwahati Water Supply Project (AUIP/PR-1/GUW/WS-02 A) and (iii) Construction of Compound Wall, River Protection etc.- AUIP/PR-1/DIB/SWM/01A and (iv) Design Build of 100 MT processing plant and 60 MT sanitary land fill site and allied works at Dibrugarh (AUIP/PR-1/DIB/SWM/01B) are in progress.

Table 6: Status of Compliance with National and State Legal Requirements

Town	Package No.	National and State Legal Requirement	Clearances given by and Date	Conditions of the Clearance/NOCs	Remarks/Action Needed
Water Supply System Subproject					
Guwahati	Construction of Water supply, Transmission Main Pipelines and allied work in Guwahati-AUIIP/PR-1/GUW/WS/01	(i) CTO for operating Diesel Generator sets under Air (Prevention & Control of Pollution) Act, 1981	No Objection Certificates CTO obtained for 2 D.G sets with capacity of 63 KVA each from Pollution Control Board Assam dated 17/7/2017. Presently Green DGs are used – no clearance is required		
Guwahati	Construction of storage reservoirs of various capacities at six locations (Gopal Nagar, NorthJyoti Nagar, Kenduguri, Basistha, Hengrabari and Nabajyoti Nagar), approach road and allied works in South East Guwahati Water Supply Project. AUIIP/PR-1/GUW/WS-02 A & AUIIP/PR-1/GUW/WS-02 B	(i) Forest (Conservation) Act 1980- For tree felling ; (ii) EIA notification 2006 and its subsequent amendments issued under Environment Protection Act, 1986 for obtaining Environmental Clearance for excavation and transportation of earth;	Tree cutting Gopalnagar: Fund of Rs. 219273 was submitted to the Forest Dept. on 24.12.2013 by AUIIP to cut & remove 73 trees. Kenduguri: Fund of Rs. 27035 was submitted to the Forest Dept. on 01.04.2017 by AUIIP to cut & remove 16 trees. Northjyotinagar: Fund of Rs. 28696 was submitted to the Forest Dept. in Feb 2017 by AUIIP to cut & remove 21 trees. Nabajyotinagar: Fund of Rs. 127000 was submitted to the Forest Dept. on 01.04.2017 by AUIIP to cut & remove 18 trees. Environmental clearances Gopalnagar: The EC for excavation and transportation of earth was obtained on	Compliance of earlier EC condition disclosed in last SEMR	Tree cutting The entire tree cutting procedure for Kenduguri, Northjyotinagar and Nabajyotinagar has been completed in 2017. For Gopalnagar, it was completed way back in 2013. Environmental Clearances The excavation activities and transportation of earth for the Gopalnagar and Kenduguri completed within the validity of

Town	Package No.	National and State Legal Requirement	Clearances given by and Date	Conditions of the Clearance/NOCs	Remarks/Action Needed
			15/02/2017 and was valid for a period on 1 year from the date of issue. Presently work completed at Gopalnagar no further EC is required. Kenduguri, Northjyotinagar, Nabajyotinagar & Hengrabari: The ECs for the respective site for excavation and transportation of earth were obtained on 08/03/2017 and was valid for a period on 1 year from the date of issue.		the respective ECs. For the other sites like Hengrabari and Nabajyotinagar application for renewal of EC was processed on 27.11.2018 and for Northjyotinagar application was processed on 25.10.2018. Follow up continued
Solid Waste Management Subproject					
Dibrugarh	Construction of Compound Wall, River Protection etc.- AUIIP/PR-1/DIB/SWM/01A Design Build 100 MT compost plant with 60 MT sanitary land fill site- AUIIP/PR-1/DIB/SWM/01B	(i) CTE for setting up 100 TPD MSW treatment and 60 MT sanitary landfill facility under Water (Prevention & Control of Pollution) Act, 1974 and Air (Prevention & Control of Pollution) Act, 1981; (ii) EIA Notification 2006, amended in 2009 – Environmental Clearance for construction of landfill and composting facility	CTE obtained for setting up 100 TPD MSW treatment and 60 MT sanitary landfill facility from Pollution Control Board Assam dated 9/12/2016. The CTE is valid till the date of commissioning of the unit of 5 years whichever is earlier (Appendix 2). Environmental Clearance obtained from State Environment Impact Assessment Authority, Assam for development and establishment of 100 TPD processing plant and 60 MT sanitary landfill on 21 st	Compliance with CTE conditions are presented in Appendix 2 Compliance with EC conditions are presented in Appendix 3	All the conditions related to the construction phase in the CTE and EC are in compliance.

Town	Package No.	National and State Legal Requirement	Clearances given by and Date	Conditions of the Clearance/NOCs	Remarks/Action Needed
			September 2015. The EC is valid for 5 years (Appendix 3).		
		(iii) No Objection Certificate (NOC) from Dibrugarh Airport	NOC (height clearance only) for construction of sanitary landfill project at Ghoramara, Dibrugarh was obtained from AAI on 28 June 2013 NOC is valid for 5 years i.e. upto 28 th June 2018 Renewal has been done on 04.12.2018 (NOC attached in Appendix 4)	(i) No light or a combination of lights which by reason of its intensity, configuration or colour may cause confusion with the aeronautical ground lights of the airport shall be installed at the site at any time during or after the construction of the building; (ii) No Radio/ TV Antenna, lighting arrestors, staircase, overhead water tank and attachment or fixtures of any kind shall project above the height indicated in said NOC; (iii) Day & Nights marking with both main and standby power supply should be provided as per ICAO standard.	The construction of SWM structures are still under process. Hence, the conditions were not triggered. NOC renewed. Validity upto 27.06.2021
		Tree felling permission from DFO, division Dibrugarh	NOC obtained on 13.12.2018 from DFO for felling of one tree at the approach road of landfill at Lekai Thakurthan (NOC attached as Appendix 5)	<ul style="list-style-type: none"> Felling should be done in presence of forest staff Out turn of the same to be transported to nearest forest Depot at Khanikar While felling attention may be taken not to disrupt the vehicular 	During felling of tree all conditions will be followed

Town	Package No.	National and State Legal Requirement	Clearances given by and Date	Conditions of the Clearance/NOCs	Remarks/Action Needed
				traffic and public	
		CTE and CTO for operating a mini batching plant under Water (Prevention & Control of Pollution) Act, 1974 and Air (Prevention & Control of Pollution) Act, 1981;	PIU Dibrugarh has directed the contractor to apply for the CTE & subsequently the CTO for the mini batching plant. No batching plant is used for the last 6 months		No use of batching plant

C. COMPLIANCE OF SAFEGUARD LOAN COVENANTS

23. The loan agreement for AUJIP Tranche 1 was signed in 2nd March 2012 and is available on ADB website (<http://www.adb.org/sites/default/files/project-document/59986/42265-02-ind-mlo1.pdf>). **Table 7** provides a summary of compliance to the loan covenants related to environmental safeguards.

Table 7: Compliance to Loan Agreements (Environmental Safeguards)

Serial No. as per Loan Agreement	AUJIP Tranche 1 Specific Covenants	Status/Issues
Environment		
Schedule 5, para 14	The Borrower shall cause the State to ensure that the preparation, design, construction, implementation, operation and decommissioning of each Subproject comply with (a) all applicable laws and regulations of the Borrower relating to environment, health, and safety; (b) the Environmental Safeguards; (c) the EARF; and (d) all measures and requirements set forth in the relevant IEE and EMP, and any corrective or preventative actions set forth in the Environment Monitoring Report.	<p>Under compliance.</p> <ul style="list-style-type: none"> - Environmental safeguard documents³ are prepared in accordance with the requirements of relevant national and state laws, ADB SPS 2009 and EARF. - Draft IEEs were prepared during project preparation and were finalized after the finalization of detailed design. The final IEEs were submitted to ADB and were approved. - For Guwahati Water Supply Subproject, re-bidding has been done for 2 packages - Updated IEE has been included in the bid and contract documents to ensure measures and requirements set forth in the IEE, specifically the EMP, will be implemented. - For Dibrugarh Storm water Drainage Subproject (only 1 package and that already awarded) - IEE has been included in the bid and contract documents to ensure measures and requirements set forth in the IEE, specifically the EMP. - For Dibrugarh SWM Subproject DPR prepared. Environment clearance has been obtained. IEE/EMP included in Bid document. In addition accepted EIA/EMP report has been included in agreement. - Regular submissions of SEMRs are done to ADB for review and disclosure in its website.
Human and Financial Resources to Implement Safeguards Requirements		
Schedule 5, para 18	The Borrower shall cause the State to make available necessary budgetary and human resources to fully	<p>Partial compliance.</p> <ul style="list-style-type: none"> - As per implementation arrangement for environmental safeguards, PMU &

³ Draft IEEs following ADB SPS were prepared based on preliminary design for all 3 AUJIP Project 1 subprojects. An environmental impact assessment (EIA) following requirements of Government of India EIA Act and Rules, and Solid Waste Management and Handling Rules was prepared for Dibrugarh SWM Subproject in order to obtain the environmental clearance. Reports following Forest Act and Rules were prepared for subproject components to be located in forest lands and those requiring tree-cutting.

Serial No. as per Loan Agreement	AUIIP Tranche 1 Specific Covenants	Status/Issues
	implement the EMPs, the RPs and any IPP,	<p>PIU has dedicated Safeguard Officials (see Figure 1 and Table 4 for details). Also in DMSC Environment Specialists are present.</p> <p>- PMU and PIUs has allocated its counterpart funds to ensure implementation of subproject EMPs. The construction contractors has allocated necessary budgets to implement mitigation measures and monitoring program as required in the IEEs.</p> <p>Tentative budgets for each contractor are attached as Appendix 6</p>
Safeguards – Related Provisions in Bidding Documents and Works Contracts		
Schedule 5, para 19	<p>The Borrower shall cause the State to ensure that all bidding documents and contracts for Works contain provisions that require contractors to:</p> <p>(a) comply with the measures and requirements relevant to the contractor set forth in the IEEs, the EMPs, the RPs and any IPP (to the extent they concern impacts on affected people during construction), and any corrective or preventative actions set out in a Safeguards Monitoring Report;</p> <p>(b) make available a budget for all such environmental and social measures;</p> <p>(c) provide the PMU with a written notice of any unanticipated environmental, resettlement or indigenous peoples risks or impacts that arise during construction, implementation or operation of the Project that were not considered in the IEEs, the EMPs, the RPs or any IPP;</p> <p>(d) adequately record the condition of roads, agricultural land and other infrastructure prior to starting to transport materials and construction; and</p> <p>(e) Fully reinstate pathways, other local infrastructure, and agricultural land to at least their pre-project condition upon the completion of construction.</p>	<p>Under compliance.</p> <p>(a) IEEs and specific provisions related to mitigation measures and environmental monitoring are included in the bidding and contract documents.</p> <p>(b) The budgets for the Environment, Health and Safety have been appended as Tentative budgets for each contractor are attached as Appendix 6</p> <p>(c) No unanticipated environmental, resettlement or indigenous people's risks or impacts; since there is little or no construction work being conducted.</p> <p>Under compliance.</p> <p>(d) Record of conditions of roads, agricultural land and other infrastructure for all the three packages are not yet submitted by the contractor.</p> <p>Not yet applicable.</p> <p>(e) Reinstatement of pathways, pathways, other local infrastructure, and agricultural land to at least their pre-project condition for all the packages are not yet required as there is little or no construction work being conducted.</p>
Safeguards Monitoring and Reporting		
Schedule 5, para 20	The Borrower shall cause the State to	Under compliance

Serial No. as per Loan Agreement	AUIIP Tranche 1 Specific Covenants	Status/Issues
	<p>do the following:</p> <p>(a) submit semi-annual Safeguards Monitoring Reports to ADB and disclose relevant information from such reports to affected persons promptly upon submission;</p> <p>(b) if any unanticipated environmental and/or social risks and impacts arise during construction, implementation or operation of the Project that were not considered in the IEEs, the EMPs, the RPs or any IPP, promptly inform ADB of the occurrence of such risks or impacts, with detailed description of the event and proposed corrective action plan; and</p> <p>(c) Report any breach of compliance with the measures and requirements set forth in the EMPs, the RPs or any IPP promptly after becoming aware of the breach.</p>	<p>(a) Semi-annual Safeguards Monitoring Reports are being submitted to ADB for review and disclosure. For any non-compliance related to ADB Safeguard policy or national regulations, corrective action plans are prepared and included in monitoring report.</p> <p>(b) No unanticipated environmental, resettlement or indigenous people's risks or impacts.</p>
Labor Standards		
Schedule 5, para 23	<p>The Borrower shall cause the State to ensure that Works contracts follow all applicable labor laws of the Borrower and the State and that these further include provisions to the effect that contractors (i) carry out HIV/AIDS awareness programs for labor and disseminate information at worksites on risks of sexually transmitted diseases and HIV/AIDS as part of health and safety measures for those employed during construction; (ii) follow and implement all statutory provisions on labor (including not employing or using children as labor, equal pay for equal work), health, safety, welfare, sanitation, and working conditions; and (iii) maximize employment of women and local poor and disadvantaged persons for construction purposes, provided that the requirements for efficiency are adequately met. Such contracts shall also include clauses for termination in case of any breach of the stated provisions by the contractors.</p>	<p>Under Compliance</p> <p>(i) H&S training has been made mandatory for workers prior to mobilization in worksites. These trainings also include specific HIV/AIDS awareness programs which are conducted among the laborers in all sites by the contractor.</p> <p>(ii) IEEs include provisions on strict implementation of applicable labor laws in the EMPs.</p> <p>(iii) Contractors are encouraged to employ women and local poor and disadvantaged persons</p>

D. COMPLIANCE STATUS WITH THE ENVIRONMENTAL MANAGEMENT AND MONITORING PLAN

24. This section presents the compliance status of Environmental Management and Monitoring Plans of Tranche-1 subproject under implementation. Under Tranche 1, the four packages i.e. (i) Construction of Water supply Transmission Main Pipelines and allied work in Guwahati (AUIIP/PR-1/GUW/WS/01), (ii) Construction of storage reservoirs of various capacities at three locations (Gopal Nagar, NorthJyoti Nagar, Kenduguri), approach road and allied works in South East Guwahati Water Supply Project (AUIIP/PR-1/GUW/WS-02 A) and (iii) Design Build of 100 MT processing plant and 60 MT sanitary land fill site and allied works at Dibrugarh (AUIIP/PR-1/DIB/SWM/01B) and (iv) Construction of Compound wall, River Protection Wall, Access Roads, Security Guard Room and Allied Works of Landfill site at Dibrugarh (AUIIP/PR-1/DIB/SWM/01A) are in progress. Photographs of ongoing construction works and environmental management measures are presented in **Appendix 1**. The contractors follow the Environmental Monitoring Plan (EMP), which is part of the IEE and Contract document. Additionally, PMU, PIU safeguards officials and Environment Specialist of DMSC regularly visit the sites and issue site inspection reports which include observations related to EHS and EMP implementation to respective contractors for compliance. All site observation reports are available with PMU, PIU and DMSC.

25. A reporting format to be filled up by the Contractor on a daily basis on compliance with EMP has been issued and they are being compiled on a monthly basis. Monthly, daily environment monitoring reports are available with PMU, PIU and DMSC.

26. In addition to desk reviews and site inspections, monitoring of selected environmental parameters have been conducted during the reporting period. The frequencies of the environmental monitoring activities are commensurate to the type and significance of the impacts. For the current working subprojects under Tranche 1, the parameters to be monitored are ambient air quality, noise levels and water quality.

27. Compliance on EMP and Environment, Health Safety Norms for Tranche 1 packages are shown in **Tables 8 to 11**.

28. For implementation of EMP, arrangement of human safety, provision of PPE for workers engaged in construction is being implemented. Training is being provided to the contractor by DMSC's Environment Specialist. Moreover instruction is given to contractors to follow the specified clause of BID document to mitigate environmental and social impacts.

29. The contractors whose work requires environmental implementation has been instructed to submit their environmental management plan for approval. Environment Management Plan as submitted by the contractor are scrutinized and checked, wherever necessary environment criteria required is added.

30. Construction contractors provide all necessary safety arrangement for individual safety and construction site, for individual they provide all type of PPEs like Safety Vest, Safety Helmet, Hand Gloves, Safety Shoes and respiratory mask. However on site partial use PPE is observed, and hence needs more awareness about need of full use of PPE among the laborers especially with risk nature of the worksite job and type of PPE used for such type of job. For construction site safety they provide safety caution tape, cautionary signages, safe passage for traffic and road users and awareness meeting with locality habitants about importance risk nature of construction job.

Table 8: Compliance of EMP and OH&S Norms. Package: Construction of Water Supply Transmission Main Pipelines and allied work in Guwahati (AUIP/PR-1/GUW/WS/01)

Sl. No.	Mitigation Activities and Method	Location	Responsible for Mitigation	Monitoring Method	Responsible for Monitoring	Compliance Status
a)	Sources of Materials					
	(i) Government permitted quarries to be used for excavation; (ii) Verify suitability of all material sources to be verified and approval of Investment PMU/PIU to be obtained; (iii) If additional quarries are required after construction has started, written approval to be obtained from PMU/PIU; and (iv) A monthly basis documentation of sources of materials to be submitted to DMSC.	Stretch of road used for laying transmission pipelines.	Contractor	Visual Observation	DMSC, PIU	For transmission pipelines, the excavation is done along the stretch of road belonging to the Govt. of Assam and refilling of excavated stretch is done on the same day.
b)	Air Quality					
	(i) PMU/PIU/DMSC to be consulted on the designated areas for stockpiling of clay, soils, gravel, and other construction materials; (ii) Exposed soil and any stockpiled onsite to be dampened by spraying with water when necessary during dry weather; (iii) Tarpaulins to be used to cover sand and other loose material when transported by trucks; and (iv) All heavy equipment and machinery to be fitted with air pollution control devices which are operating correctly.	Three reservoir sites.	Contractor	Visual Observation	DMSC, PIU	Materials and wastes are located at secure /designated locations. The transmission pipeline stretches are refilled on the same day of excavation. Regular water sprinkling is conducted at the sites. Covered trucks are used for transportation of materials. The vehicles used at sites are PUC certified which are verified by AUIP and were found to be genuine. Sample copy of PUC certificate attached as Appendix

Sl. No.	Mitigation Activities and Method	Location	Responsible for Mitigation	Monitoring Method	Responsible for Monitoring	Compliance Status
						7 for reference. During construction air quality monitoring carried out as per EMP. (Complete test certificates available in DMSC, PMU office as back up paper)
c)	Traffic Management					
	(i) Traffic flow to be avoided during construction activities.	All sites	Contractor	Visual observation and compliance to Traffic Management Plan	DMSC, PIU	Contractor to ensure and implement traffic management measures at the sites and makes sure that the traffic is not significantly impeded during construction period. Sample Traffic Management Plan is attached as Appendix 8 .
d)	Surface water quality					
	(i) Stockpiling of earth fill to be avoided during monsoon season unless covered by tarpaulins or plastic sheets; (ii) Re-use of excess spoils and materials to be prioritized in the construction works .If spoils are to be disposed, consult with PMU/PIU/DMSC on designated disposal areas; (iii) Temporary silt traps or sedimentation basins to be installed along the drainage leading to the water bodies; (iv) Fuels and lubricants to be placed away from any drainage leading to	All sites	Contractor	Compliance to Spoil Management Plan	DMSC, PIU	Waste/Spoil Management Plan is prepared by the contractor to manage earth fills and spoils to which the contractors comply to. (See Appendix 9) Wastes are collected by the municipality.

Sl. No.	Mitigation Activities and Method	Location	Responsible for Mitigation	Monitoring Method	Responsible for Monitoring	Compliance Status
	<p>water bodies.</p> <p>(v) Wastes generated by construction activities to be disposed in designated sites; and</p> <p>(vi) Surface quality inspection to be conducted according to the Environmental Management Plan (EMP).</p>					
e)	Noise Levels					
	<p>(i) Activities to be planned in consultation with PMU/PIU/DMSC so that activities with the greatest potential to generate noise are conducted during periods of the day which will result in least disturbance;</p> <p>(ii) Horns not be used unless it is necessary to warn other road users or animals of the vehicle's approach;</p> <p>(iii) Noise from construction equipment to be minimised by using vehicle silencers, fitting jack hammers with noise- reducing mufflers, and portable street barriers the sound impact to surrounding sensitive receptor, and</p> <p>(iv) Maximum sound levels to maintained as such to not exceed 80 decibels (dbA) when measured at a distance of 10 m or more from the vehicle/s.</p>	All sites	Contractor	Visual observation and Monitoring report	DMSC, PIU	<p>Complied</p> <p>Activities with high noise potential are not conducted during night-time</p> <p>No noise producing machinery mobilized at site.</p> <p>PPE utilized as per requirement.</p> <p>During construction monitoring done. (Complete test certificates available in DMSC and PMU office as back up paper).</p>
f)	Ecological resources –Terrestrial					
	(i) Minimize removal of	All sites	Contractor	Visual	DMSC, PIU	No trees have been cut during the

Sl. No.	Mitigation Activities and Method	Location	Responsible for Mitigation	Monitoring Method	Responsible for Monitoring	Compliance Status
	vegetation/trees; (ii) If required permission to be taken from the Govt.; (iii) Required to plant three (3) native trees for every one (1) that is removed; and (iv) Employees to be prohibited from poaching wildlife, bird hunting, and cutting of trees for firewood.			observation and Monitoring report		reporting period. Employees are prohibited from poaching wildlife and cutting of trees for firewood.
g)	Existing Infrastructure and Facilities					
	(i) List to be obtained from PMU/PIU/DMSC of affected utilities and operators, if any; (ii) A contingency plan to be prepared to include actions to be done in case of unintentional interruption of service	All sites	Contractor	Visual observation and report	DMSC, PIU	No disruption of services or damage to existing infrastructure has taken place during the reporting period.
h)	Landscape and Aesthetics					
	(i) Heavy duty vehicles, temporary structures at construction camps and stockpiles to be placed in a way that they do not impact the aesthetics of the sites; (ii) Storage areas to be properly fenced off; (iii) Waste Management List to be prepared and implemented; (iv) Stock piling of excess excavated soils to be avoided;	All sites	Contractor	Visual Observation and compliance to Spoil Management Plan.	DMSC, PIU	Parking area is specified for heavy vehicles at the sites. Adequate store facilities are provided at the work sites to store the stockpiles. Construction wastes are reused wherever possible. Disposable wastes are collected by the municipality. Spoil Management plan have been prepared. Sample attached

Sl. No.	Mitigation Activities and Method	Location	Responsible for Mitigation	Monitoring Method	Responsible for Monitoring	Compliance Status
	<p>(v) GMC to be coordinated for beneficial uses of excess excavated soils of about 91889 cum or immediately dispose/ use to designated areas;</p> <p>(vi) Used oil and lubricants to be recovered and reused or removed from the sites;</p> <p>(vii) Solid waste management to be done according to the following preference hierarchy: reuse, recycling and disposal to designated areas;</p> <p>(viii) All wreckage, rubbish to be removed;</p> <p>(ix) Mature trees to be retained on and around the site where possible;</p> <p>(x) Construction activities to be clustered on site on a specific area to avoid "sprawl";</p> <p>(xi) Unwanted material and litter to be removed on frequent basis; and</p> <p>(xii) PMU/PIU/DMSC to be requested to report in writing that the necessary environmental restoration work has been adequately performed before acceptance of work.</p>					as Appendix 9.
i)	Accessibility					
	(i) Transport action routes to be	All sites	Contractor	Visual	DMSC, PIU	Contractor to ensure and

Sl. No.	Mitigation Activities and Method	Location	Responsible for Mitigation	Monitoring Method	Responsible for Monitoring	Compliance Status
	<p>planned so that heavy vehicles do not use narrow local roads, except in the immediate vicinity of delivery sites;</p> <p>(ii) Transport and hauling activities during to be scheduled during non-peak hours;</p> <p>(iii) Entry and exit points to be located in areas where there is low potential for traffic congestion;</p> <p>(iv) Site to be kept free from all unnecessary obstructions;</p> <p>(v) Vehicles to be driven in a considerate manner;</p> <p>(vi) Guwahati Traffic Office to be coordinated for temporary road diversion sand with for provision of traffic aids if transportation activities cannot be avoided during peak hours;</p> <p>(vii) Affected sensitive receptors to be notified by providing sign boards informing nature and duration of construction works and contact numbers for concerns/complaints;</p> <p>(viii) Planks across trenches to be provided in front of businesses, and ensure works are completed quickly to avoid disruption.</p> <p>(ix) Full street closure to be avoided.</p>			<p>observation and compliance to Traffic Management Plan</p>		<p>implement traffic management measures at the sites and makes sure that the traffic is not significantly impeded during construction period.</p> <p>Sample Traffic Management Plan is attached as Appendix 8.</p>

Sl. No.	Mitigation Activities and Method	Location	Responsible for Mitigation	Monitoring Method	Responsible for Monitoring	Compliance Status
j)	Socio-Economic–Income.					
	(i) Space to be provided for access between mounds of soil; (ii) Walk ways and metal sheets to be provided where required for people; (iii) Workforce to be increased in front of critical areas such as institutions, place of worship, business establishment, hospitals, and schools; (iv) Businesses and institutions to be consulted regarding operating hours and factoring this in work schedules; (v) Signboards to be provided for pedestrians to inform nature and duration of construction work and contact numbers for concerns/complaints.	All sites	Contractor	Visual observation	DMSC, PIU	Walkways are provided for the people. Workforce is increased whenever required. Business and institutions are consulted and also informed before starting daily works. Signage boards are provided at most of the sites
k)	Employment Generation					
	(i) Labor intensive construction measures to be used where appropriate; (ii) Local (unskilled) labor to be employed wherever possible; (iii) Adequate training to be provided to the labors to benefit individuals beyond completion of the subproject.	All sites	Contractor	Visual observation and Govt. ID cards of employees	DMSC, PIU	Labor intensive construction measures are used where appropriate and local labors are employed wherever it is possible. Attendance registers are checked by the DMSC and AUHIP officials during their site visits. However, it is observed that the attendance sheets are not regularly

Sl. No.	Mitigation Activities and Method	Location	Responsible for Mitigation	Monitoring Method	Responsible for Monitoring	Compliance Status
	(iv) Recruitment of labors will take place offsite.					maintained. Periodical H&S trainings are provided to workers by Safety officer. Records of trainings conducted are properly maintained.
I)	Occupational Health and Safety					
	<p>(i) A site-specific Health and Safety(H&S) Plan to be developed which will include measures such as:(a) excluding public from the site; (b) ensuring all workers are provided with and use Personal Protective Equipment like helmet, gumboot, safety belt, gloves, nose musk and earplugs;(c) H&S Training for all site personnel;(d)documented procedures to be followed for all site activities ;and(e) documentation of work-related accidents;</p> <p>(ii) Ensure that qualified first- aid can be provided at all times. Equipped first-aid stations shall be easily accessible throughout the project site;</p> <p>(iii) Medical insurance coverage to be provided for workers;</p> <p>(iv) All installations to be secured from unauthorized intrusion and accident risks;</p>	All sites	Contractor	Visual observation, Compliance to respective Health and Safety Plans, Accident reports and Medical insurance documents	DMSC, PIU	<p>Site specific health and safety plans have been prepared by the contractor. Back up copy available with DMSC and PMU</p> <p>Personal Protective Equipment like helmet, gumboot, safety belt, gloves, nose musk and earplugs are provided to the workers by the contractor. However, the implementation part of this needs to be improved. Often labors were observed without PPE in spite of providing them.</p> <p>First Aid boxes are provided on the work sites. However, trained First Aiders are still not available on sites.</p> <p>For any incidents and accidents, accident reports and first aid reports are maintained at the working site. During report period there is no as such first aid/ minor accident case.</p> <p>WC policy renewed and available</p>

Sl. No.	Mitigation Activities and Method	Location	Responsible for Mitigation	Monitoring Method	Responsible for Monitoring	Compliance Status
	<p>(v) Potable drinking water to be supplied at working sites;</p> <p>(vi) Clean eating areas to be provided where workers are not exposed to hazardous or noxious substances; and</p> <p>(vii) H&S orientation training to be provided to all new workers to ensure that they are apprised of the basic site rules of work at the site, personal protective protection, and preventing injuring to fellow workers;</p> <p>(viii) Visitor orientation to be provided if visitors to the site can gain access to areas where hazardous conditions or substances may be present. Ensure also that visitor/s do not enter hazard areas unescorted;</p> <p>(ix) Visibility of workers to be ensured through their use of high visibility vests when working in or walking through heavy equipment operating areas.</p> <p>(x) Ensure moving equipment is outfitted with audible back-up alarms;</p> <p>(xi) Sign boards to be marked and provided for hazardous areas such as energized electrical devices and lines, service rooms housing high</p>					<p>with contractor validity upto 14.10.2019 (Appendix 10)</p> <p>Work sites are secured. Adequate barricading is provided along the work sites. At few locations caution tape placement partially complied</p> <p>Potable drinking water is provided to workers at the work sites and separate eating areas are provided to the workers at the work sites;</p> <p>Safety induction and periodical H&S trainings are provided to workers by Safety Officer. Records of trainings conducted are properly maintained. (Appendix 11)</p> <p>DMSC's Environment Specialist arranged training program for contractor. Detail attached as Appendix 12.</p> <p>The working sites do not have areas where hazardous conditions or substances may be present.</p> <p>Workers are provided with high visibility safety jackets while working in areas with high traffic movement.</p> <p>Signages are provided along the road stretch where transmission pipelines are laid.</p>

Sl. No.	Mitigation Activities and Method	Location	Responsible for Mitigation	Monitoring Method	Responsible for Monitoring	Compliance Status
	<p>voltage equipment, and areas for storage and disposal. Signage shall be in accordance with international standards and be well known to, and easily understood by workers, visitors, and the general public as appropriate; and</p> <p>(xii) Disallow worker exposure to noise level greater than 85 dBA for adoration of more than 8 hours per day without hearing protection. The use of hearing protection shall be enforced actively.</p>					Work with noise exposure greater than 85 dBA for adoration of more than 8 hours per day is not carried out in the working sites.
m)	Core Labor Standard (CLS)- safety and compliance					
	<p>(i) Monitoring compliance with national labor laws and regulations provided that these national laws are consistent with CLS. PMU to ensure that bidding and contract documents include specific provisions requiring contractors to comply with all: (i) applicable labor laws and core labor standards on: (a) prohibition of child labor as defined in national legislation for construction and maintenance activities; (b) equal pay for equal work of equal value regardless of gender, ethnicity or caste; and (c) elimination of forced labor; and (ii) the requirement to disseminate information on sexually transmitted diseases including HIV/AIDS to employees and local communities</p>	All sites	Contractor	Visual observation, Periodic Medical Examinations reports, Employee ID cards and Training records	DMSC, PIU	<p>Contractor does not employ more than 20 workers and hence does not require the labour license. An affidavit stating the same is attached as Appendix 13.</p> <p>Periodic Medical Examinations were conducted for the workers by the contractor and Sample report is attached as Appendix 14 for reference.</p> <p>Child labor and forced labor are prohibited.</p> <p>Equal pay is provided.</p> <p>HIV awareness trainings needs to be conducted for workers</p>

Sl. No.	Mitigation Activities and Method	Location	Responsible for Mitigation	Monitoring Method	Responsible for Monitoring	Compliance Status
	surrounding the project sites.					
n)	Community Health and Safety					
	<ul style="list-style-type: none"> (i) Routes to be planned so as to avoid times of peak-pedestrian activities; (ii) Liaise with PMU/PIU/DMSC in identifying high-risk areas on route cards/maps; (iii) Maintain regularly the vehicles and use of manufacturer- approved parts to minimize potentially serious accidents caused by equipment malfunction or premature failure; (iv) Road signs and flag persons to be provided to warn; (v) Protective fencing to be provided around open trenches, and cover any open trench with metal planks during non- construction hours. Potentially cause soil contamination; (vi) Recover used oil and lubricants and reuse or remove from the site; (vii) Manage solid waste according to the following preference hierarchy :reuse, recycling and disposal to designated areas; (viii) Remove all wreckage, rubbish, or temporary structures(such as 	All sites	Contractor	Traffic management plans	DMSC, PIU	<p>Contractor to ensure and implement traffic management measures at the sites and makes sure that the traffic is not significantly impeded during construction period. Pedestrians are considered during the preparation of the Traffic Management Plan.</p> <p>The traffic management plans are appended as Appendix 8</p> <p>The transmission pipeline stretches are refilled on the same day of excavation.</p> <p>Adequate store facilities are provided at the work sites to store the stockpiles.</p> <p>Construction wastes are reused wherever possible. Disposable wastes are collected by the municipality.</p> <p>No complaints have been received from pedestrians.</p>

Sl. No.	Mitigation Activities and Method	Location	Responsible for Mitigation	Monitoring Method	Responsible for Monitoring	Compliance Status
	buildings, shelters, and latrines) which are no longer required ;and (ix) Request PMU/PIU/DMSC to report in writing that the camp has been vacated and restored to pre-project conditions before acceptance of work.					
o)	Office, Work camps & Storage					
	(i) Consultation with PIU/ DMSC to be done before locating project offices, sheds, and construction plants; (ii) Removal of vegetation to be minimized and disallow cutting of trees; (iii) Water and sanitation facilities to be provided for employees/labours; (iv) Employees to be prohibited from poaching wildlife and cutting of trees for firewood; (v) Train employees in the storage and handling of materials which can potentially cause soil contamination; (vi) Used oil and lubricants to be recovered and reused or removed from the site; (vii) Solid waste to be managed according to the following preference hierarchy: reuse,	All sites	Contractor	Visual observation	DMSC, PIU	Site office and labor camps for unskilled workers are constructed in VIP road area. For the skilled workers, rented flats are taken to accommodate them. Adequate water and sanitation facilities are provided in these sites. Employees are prohibited from poaching wildlife and cutting of trees for firewood. Adequate storage areas are provided at the work sites and workers are infirmed about the storage and handling of materials which can potentially cause soil contamination.

Sl. No.	Mitigation Activities and Method	Location	Responsible for Mitigation	Monitoring Method	Responsible for Monitoring	Compliance Status
	<p>recycling and disposal to designated areas;</p> <p>(viii) All wreckage, rubbish, or temporary structures (such as buildings, shelters, and latrines) to be which are no longer required; and</p> <p>(ix) Request DMSC/ PIU to report in writing that the camp has been vacated and restored to pre-project conditions before acceptance of work.</p>					
p)	Social and Cultural Resources					
	<p>(i) The protocol to be strictly followed for chance finds in any excavation work;</p> <p>(ii) PMU/PIU/DMSC or any authorized person to be requested with archaeological field training to observe excavation;</p> <p>(iii) Work to be stopped immediately to allow further investigation if any finds are suspected; and</p> <p>(iv) PMU/PIU/DMSC to be informed if a find is suspected and take any action they require ensuring its removal or protection in situ.</p>	All sites	Contractor	Visual observation & record	DMSC, PIU	Currently not applicable

DMSC =Design, Management and Supervision Consultant, H&S =health and safety, PMU=Project Management Unit; PIU = Project Implementation Unit;
GMC =Guwahati Municipal Corporation

Table 9: Compliance of EMP and OH&S Norms. Package: Construction of storage reservoirs of various capacities at three locations (Gopal Nagar, NorthJyoti Nagar, Kenduguri), approach road and allied works in South East Guwahati Water Supply Project (AUIIP/PR-1/GUW/WS-02A)

Sl. No.	Mitigation Activities and Method	Location	Responsible for Mitigation	Monitoring Method	Responsible for Monitoring	Compliance Status
a)	Sources of Materials					
	(i) Government permitted quarries to be used for excavation; (ii) Verify suitability of all material sources to be verified and approval of Investment PMU/PIU to be obtained; (iii) If additional quarries are required after construction has started, written approval to be obtained from PMU/PIU; and (iv) A monthly basis documentation of sources of materials to be submitted to DMSC.	Three reservoir sites (Gopalnagar, Kenduguri & Northjyotinagar)	Contractor	Visual Observation	DMSC, PIU	Excavation has been done only in the three reservoir locations and their respective approach roads for which the lands belong to AUIIP.
b)	Air Quality					
	(i) PMU/PIU/DMSC to be consulted on the designated areas for stockpiling of clay, soils, gravel, and other construction materials; (ii) Exposed soil and any stockpiled onsite to be dampened by spraying with water when necessary during dry weather; (iii) Tarpaulins to be used to cover sand and other loose material when transported by trucks; and (iv) All heavy equipment and machinery to be fitted with air pollution control devices which are operating correctly.	Three reservoir sites.	Contractor	Visual Observation	DMSC, PIU	Materials and wastes are located at secure /designated locations. Regular water sprinkling is conducted at the sites. Covered trucks are used for transportation of materials. The vehicles used at sites are PUC certified which are verified by AUIIP and were found to be genuine. Sample copy of PUC certificate attached as Appendix 7 for reference. During construction air quality

Sl. No.	Mitigation Activities and Method	Location	Responsible for Mitigation	Monitoring Method	Responsible for Monitoring	Compliance Status
						monitoring carried out as per EMP. (Complete test certificates available in DMSC, PMU office as back up paper)
c)	Traffic Management					
	Traffic flow to be avoided during construction activities.	All sites	Contractor	Visual observation and compliance to Traffic Management Plan	DMSC, PIU	Reservoirs are located at isolated location. – no traffic management plan is required.
d)	Surface water quality					
	<ul style="list-style-type: none"> (i) Stockpiling of earth fill to be avoided during monsoon season unless covered by tarpaulins or plastic sheets; (ii) Re-use of excess spoils and materials to be prioritized in the construction works .If spoils are to be disposed, consult with PMU/PIU/DMSC on designated disposal areas; (iii) Temporary silt traps or sedimentation basins to be installed along the drainage leading to the water bodies; (iv) Fuels and lubricants to be placed away from any drainage leading to water bodies. (v) Wastes generated by construction activities to be disposed in designated sites; and (vi) Surface quality inspection to be 	All sites	Contractor	Compliance to Spoil Management Plan	DMSC, PIU	<p>Waste/Spoil Management Plan is prepared by the contractor (Appendix 9) to manage earth fills and spoils to which the contractors comply to. The excavated soil from the reservoir sites are used for levelling approach roads and other low lying areas in other reservoir sites under AUJIP.</p> <p>Adequate storage area for storing fuels and lubricants is provided in Gopalnagar reservoir site. In Kenduguri and Northjyotinagar, fuels and lubricants are not stored for longer period of time.</p> <p>Wastes are collected by the municipality.</p>

Sl. No.	Mitigation Activities and Method	Location	Responsible for Mitigation	Monitoring Method	Responsible for Monitoring	Compliance Status
	conducted according to the Environmental Management Plan (EMP).					
e)	Noise Levels					
	<p>(i) Activities to be planned in consultation with PMU/PIU/DMSC so that activities with the greatest potential to generate noise are conducted during periods of the day which will result in least disturbance;</p> <p>(ii) Horns not be used unless it is necessary to warn other road users or animals of the vehicle's approach;</p> <p>(iii) Noise from construction equipment to be minimised by using vehicle silencers, fitting jack hammers with noise- reducing mufflers, and portable street barriers the sound impact to surrounding sensitive receptor, and</p> <p>(iv) Maximum sound levels to maintained as such to not exceed 80 decibels (dbA) when measured at a distance of 10 m or more from the vehicle/s.</p>	All sites	Contractor	Visual observation and Monitoring report	DMSC, PIU	<p>Complied</p> <p>Activities with high noise potential are not conducted during night-time</p> <p>No noise producing machinery mobilized at site. PPE utilized as per requirement. During construction monitoring done. (Complete test certificates available at DMSC and PMU office as back up paper).</p>
f)	Ecological resources –Terrestrial					
	<p>(i) Minimize removal of vegetation/trees;</p> <p>(ii) If required permission to be taken from the Govt.;</p> <p>(iii) Required to plant three (3) native</p>	All sites	Contractor	Visual observation and Monitoring report	DMSC, PIU	<p>No trees have been cut during the reporting period.</p> <p>Employees are prohibited from poaching wildlife and cutting of</p>

Sl. No.	Mitigation Activities and Method	Location	Responsible for Mitigation	Monitoring Method	Responsible for Monitoring	Compliance Status
	trees for every one (1) that is removed; and (iv) Employees to be prohibited from poaching wildlife, bird hunting, and cutting of trees for firewood.					trees for firewood.
g)	Existing Infrastructure and Facilities					
	(i) List to be obtained from PMU/PIU/DMSC of affected utilities and operators, if any; (ii) A contingency plan to be prepared to include actions to be done in case of unintentional interruption of service	All sites	Contractor	Visual observation and report	DMSC, PIU	No disruption of services or damage to existing infrastructure has taken place during the reporting period.
h)	Landscape and Aesthetics					
	(i) Heavy duty vehicles, temporary structures at construction camps and stockpiles to be placed in a way that they do not impact the aesthetics of the sites; (ii) Storage areas to be properly fenced off; (iii) Waste Management List to be prepared and implemented; (iv) Stock piling of excess excavated soils to be avoided; (v) GMC to be coordinated for beneficial uses of excess excavated soils of about 91889 cum or immediately dispose/ use	All sites	Contractor	Visual Observation and compliance to Spoil Management Plan.	DMSC, PIU	Parking area is specified for heavy vehicles at the sites. Adequate store facilities are provided at the work sites to store the stockpiles. Construction wastes are reused wherever possible. Disposable wastes are collected by the municipality. Spoil Management plan have been prepared. Sample attached as Appendix 9 .

Sl. No.	Mitigation Activities and Method	Location	Responsible for Mitigation	Monitoring Method	Responsible for Monitoring	Compliance Status
	<p>to designated areas;</p> <p>(vi) Used oil and lubricants to be recovered and reused or removed from the sites;</p> <p>(vii) Solid waste management to be done according to the following preference hierarchy: reuse, recycling and disposal to designated areas;</p> <p>(viii) All wreckage, rubbish to be removed;</p> <p>(ix) Mature trees to be retained on and around the site where possible;</p> <p>(x) Construction activities to be clustered on site on a specific area to avoid "sprawl";</p> <p>(xi) Unwanted material and litter to be removed on frequent basis; and</p> <p>(xii) PMU/PIU/DMSC to be requested to report in writing that the necessary environmental restoration work has been adequately performed before acceptance of work.</p>					
i)	Accessibility					
	<p>(i) Transport action routes to be planned so that heavy vehicles do not use narrow local roads, except in the immediate vicinity of delivery sites;</p>	All sites	Contractor	Visual observation and compliance to Traffic Management Plan- if any	DMSC, PIU	Contractor to ensure and implement traffic management measures at the sites and makes sure that the traffic is not significantly impeded during

Sl. No.	Mitigation Activities and Method	Location	Responsible for Mitigation	Monitoring Method	Responsible for Monitoring	Compliance Status
	<ul style="list-style-type: none"> (ii) Transport and hauling activities during to be scheduled during non-peak hours; (iii) Entry and exit points to be located in areas where there is low potential for traffic congestion; (iv) Site to be kept free from all unnecessary obstructions; (v) Vehicles to be driven in a considerate manner; (vi) Guwahati Traffic Office to be coordinated for temporary road diversion sand with for provision of traffic aids if transportation activities cannot be avoided during peak hours; (vii) Affected sensitive receptors to be notified by providing sign boards informing nature and duration of construction works and contact numbers for concerns/complaints; (viii) Planks across trenches to be provided in front of businesses, and ensure works are completed quickly to avoid disruption. (ix) Full street closure to be avoided. 					<p>construction period.</p> <p>Reservoirs at isolated locations. No traffic management plan is required</p>
j)	Socio-Economic–Income.					
	(i) Space to be provided for access between mounds of soil;	All sites	Contractor	Visual observation	DMSC, PIU	<p>Walkways are provided for the people.</p> <p>Workforce is increased whenever</p>

Sl. No.	Mitigation Activities and Method	Location	Responsible for Mitigation	Monitoring Method	Responsible for Monitoring	Compliance Status
	<p>(ii) Walk ways and metal sheets to be provided where required for people;</p> <p>(iii) Workforce to be increased in front of critical areas such as institutions, place of worship, business establishment, hospitals, and schools;</p> <p>(iv) Businesses and institutions to be consulted regarding operating hours and factoring this in work schedules;</p> <p>(v) Signboards to be provided for pedestrians to inform nature and duration of construction work and contact numbers for concerns/complaints.</p>					<p>required.</p> <p>Signage boards are provided at Gopalnagar only. Instruction has been given to contractor for arrangement of sign board at rest of the construction locations.</p>
k)	Employment Generation					
	<p>(i) Labor intensive construction measures to be used where appropriate;</p> <p>(ii) Local (unskilled) labor to be employed wherever possible;</p> <p>(iii) Adequate training to be provided to the labors to benefit individuals beyond completion of the subproject.</p> <p>(iv) Recruitment of labors will take place offsite.</p>	All sites	Contractor	Visual observation and Govt. ID cards of employees	DMSC, PIU	<p>Labor intensive construction measures are used where appropriate and local labors are employed wherever it is possible. Attendance registers are checked by the DMSC and AUHIP officials during their site visits. However, it is observed that the attendance sheets are not regularly maintained.</p> <p>Periodical H&S trainings are provided to workers by Safety officer. Records of trainings conducted are not properly</p>

Sl. No.	Mitigation Activities and Method	Location	Responsible for Mitigation	Monitoring Method	Responsible for Monitoring	Compliance Status
						maintained.
I)	Occupational Health and Safety					
	<p>(i) A site-specific Health and Safety(H&S) Plan to be developed which will include measures such as:(a) excluding public from the site; (b) ensuring all workers are provided with and use Personal Protective Equipment like helmet, gumboot, safety belt, gloves, nose musk and earplugs;(c) H&S Training for all site personnel;(d)documented procedures to be followed for all site activities ;and(e) documentation of work-related accidents;</p> <p>(ii) Ensure that qualified first- aid can be provided at all times. Equipped first-aid stations shall be easily accessible throughout the project site;</p> <p>(iii) Medical insurance coverage to be provided for workers;</p> <p>(iv) All installations to be secured from unauthorized intrusion and accident risks;</p>	All sites	Contractor	Visual observation, Compliance to respective Health and Safety Plans, Accident reports and Medical insurance documents	DMSC, PIU	<p>Site specific health and safety plans have been prepared by the contractor. Back up copy available with DMSC and PMU</p> <p>Personal Protective Equipment like helmet, gumboot, safety belt, gloves, nose musk and earplugs are provided to the workers by the contractor. However, the implementation part of this needs to be improved. Often labours were observed without PPE in spite of providing them.</p> <p>First Aid boxes are provided on the work sites. However, trained First Aiders are still not available on sites.</p> <p>For any incidents and accidents, accident reports and first aid reports are maintained at the working site. During report period there is no as such first aid/ minor accident case.</p> <p>Contractor. has taken Employers liability policy for its</p>

Sl. No.	Mitigation Activities and Method	Location	Responsible for Mitigation	Monitoring Method	Responsible for Monitoring	Compliance Status
	<p>(v) Potable drinking water to be supplied at working sites;</p> <p>(vi) Clean eating areas to be provided where workers are not exposed to hazardous or noxious substances; and</p> <p>(vii) H&S orientation training to be provided to all new workers to ensure that they are apprised of the basic site rules of work at the site, personal protective protection, and preventing injuring to fellow workers;</p> <p>(viii) Visitor orientation to be provided if visitors to the site can gain access to areas where hazardous conditions or substances may be present. Ensure also that visitor/s do not enter hazard areas unescorted;</p> <p>(ix) Visibility of workers to be ensured through their use of high visibility vests when working in or walking through heavy equipment operating areas.</p> <p>(x) Ensure moving equipment is outfitted with audible back- up alarms;</p> <p>(xi) Sign boards to be marked and provided for hazardous areas such as energized electrical devices and lines, service rooms housing high</p>					<p>employees/workers which valid from a period of 23/02/2018 to 22/02/2019.(Appendix 10)</p> <p>Work sites are secured. Adequate barricading is provided along the work sites.</p> <p>Potable drinking water is provided to workers at the work sites and separate eating areas are provided to the workers at the work sites;</p> <p>Safety induction and periodical H&S trainings are provided to workers by Safety Officer. Records of trainings conducted are not properly maintained.</p> <p>DMSC's Environment Specialist arranged training program for contractor. Detail attached as Appendix 12.</p> <p>Contractor has conducted First Aid and HIV Aids Awareness Program in the month of December 2018 and their report is appended as Appendix 15</p> <p>The working sites do not have areas where hazardous conditions or substances may be present.</p> <p>Workers are provided with high visibility safety jackets while working in areas with high traffic movement.</p>

Sl. No.	Mitigation Activities and Method	Location	Responsible for Mitigation	Monitoring Method	Responsible for Monitoring	Compliance Status
	<p>voltage equipment, and areas for storage and disposal. Signage shall be in accordance with international standards and be well known to, and easily understood by workers, visitors, and the general public as appropriate; and</p> <p>(xii) Disallow worker exposure to noise level greater than 85 dBA for adoration of more than 8hours per day without hearing protection. The use of hearing protection shall be enforced actively.</p>					<p>Sign boards are provided for areas of storage in the reservoir sites.</p> <p>Signages not properly maintained</p> <p>Work with noise exposure greater than 85dBA for adoration of more than 8 hours per day is not carried out in the working sites.</p>

Sl. No.	Mitigation Activities and Method	Location	Responsible for Mitigation	Monitoring Method	Responsible for Monitoring	Compliance Status
m)	Core Labor Standard (CLS)- safety and compliance					
	Monitoring compliance with national labor laws and regulations provided that these national laws are consistent with CLS. PMU to ensure that bidding and contract documents include specific provisions requiring contractors to comply with all: (i) applicable labor laws and core labor standards on: (a) prohibition of child labor as defined in national legislation for construction and maintenance activities; (b) equal pay for equal work of equal value regardless of gender, ethnicity or caste; and (c) elimination of forced labor; and (ii) the requirement to disseminate information on sexually transmitted diseases including HIV/AIDS to employees and local communities surrounding the project sites.	All sites	Contractor	Visual observation, Periodic Medical Examinations reports, Employee ID cards and Training records	DMSC, PIU	<p>Contractor's have a labour License to employ more than 20 employees valid from 22-06-2018 till 04-05-2019 (Appendix 13).</p> <p>Periodic Medical Examinations were conducted for the workers by the contractor and Sample report is attached as Appendix 14 for reference.</p> <p>Child labor and forced labor are prohibited.</p> <p>Equal pay is provided.</p> <p>HIV awareness trainings are conducted for the labors by the contractors. The training records are appended as Appendix 15</p>
n)	Community Health and Safety					
	<p>(i) Routes to be planned so as to avoid times of peak-pedestrian activities;</p> <p>(ii) Liaise with PMU/PIU/DMSC in identifying high-risk areas on route cards/maps;</p> <p>(iii) Maintain regularly the vehicles and</p>	All sites	Contractor	Traffic management plans	DMSC, PIU	Contractor to ensure and implement traffic management measures at the sites and makes sure that the traffic is not significantly impeded during construction period. Pedestrians are considered during the preparation of the Traffic

Sl. No.	Mitigation Activities and Method	Location	Responsible for Mitigation	Monitoring Method	Responsible for Monitoring	Compliance Status
	<p>use of manufacturer- approved parts to minimize potentially serious accidents caused by equipment malfunction or premature failure;</p> <p>(iv) Road signs and flag persons to be provided to warn;</p> <p>(v) Protective fencing to be provided around open trenches, and cover any open trench with metal planks during non- construction hours. Potentially cause soil contamination;</p> <p>(vi) Recover used oil and lubricants and reuse or remove from the site;</p> <p>(vii) Manage solid waste according to the following preference hierarchy :reuse, recycling and disposal to designated areas;</p> <p>(viii) Remove all wreckage, rubbish, or temporary structures(such as buildings, shelters, and latrines) which are no longer required ;and</p> <p>(ix) Request PMU/PIU/DMSC to report in writing that the camp has been vacated and restored to pre-project conditions before acceptance of work.</p>					<p>Management Plan.</p> <p>All reservoirs are at isolated locations, no as such traffic management plan is required</p> <p>Adequate store facilities are provided at the work sites to store the stockpiles.</p> <p>Construction wastes are reused wherever possible. Disposable wastes are collected by the municipality.</p>
o)	Office, Work camps & Storage					
	(i) Consultation with PIU/ DMSC to be done before locating project	All sites	Contractor	Visual observation	DMSC, PIU	Site offices and labor camps are constructed at the Gopal Nagar

Sl. No.	Mitigation Activities and Method	Location	Responsible for Mitigation	Monitoring Method	Responsible for Monitoring	Compliance Status
	<p>offices, sheds, and construction plants;</p> <p>(ii) Removal of vegetation to be minimized and disallow cutting of trees;</p> <p>(iii) Water and sanitation facilities to be provided for employees/labours;</p> <p>(iv) Employees to be prohibited from poaching wildlife and cutting of trees for firewood;</p> <p>(v) Train employees in the storage and handling of materials which can potentially cause soil contamination;</p> <p>(vi) Used oil and lubricants to be recovered and reused or removed from the site;</p> <p>(vii) Solid waste to be managed according to the following preference hierarchy: reuse, recycling and disposal to designated areas;</p> <p>(viii) All wreckage, rubbish, or temporary structures (such as buildings, shelters, and latrines) to be which are no longer required; and</p> <p>(ix) Request DMSC/ PIU to report in writing that the camp has been vacated and restored to pre-project conditions before acceptance of</p>					<p>and Kenduguri sites. The workers working at the North Jyotinagar reservoir site travel from these two labor camps as and when required.</p> <p>Adequate water and sanitation facilities are provided in these sites.</p> <p>Employees are prohibited from poaching wildlife and cutting of trees for firewood.</p> <p>Adequate storage areas are provided at the work sites and workers are informed about the storage and handling of materials which can potentially cause soil contamination.</p>

Sl. No.	Mitigation Activities and Method	Location	Responsible for Mitigation	Monitoring Method	Responsible for Monitoring	Compliance Status
	work.					
p)	Social and Cultural Resources					
	(i) The protocol to be strictly followed for chance finds in any excavation work; (ii) PMU/PIU/DMSC or any authorized person to be requested with archaeological field training to observe excavation; (iii) Work to be stopped immediately to allow further investigation if any finds are suspected; and (iv) PMU/PIU/DMSC to be informed if a find is suspected and take any action they require ensuring its removal or protection in situ.	All sites	Contractor	Visual observation & record	DMSC, PIU	Currently not applicable

DMSC =Design, Management and Supervision Consultant, H&S =health and safety, PMU=Project Management Unit; PIU = Project Implementation Unit; GMC =Guwahati Municipal Corporation

Table 10: Compliance of EMP and OH&S Norms. Package: Design Build of 100 MT processing plant and 60 MT sanitary land fill site and allied works at Dibrugarh (AUIP/PR-1/DIB/SWM/01B)

Sl. No.	Mitigation Activities and Method	Location	Responsible for Mitigation	Monitoring Method	Responsible for Monitoring	Compliance Status
a)	Sources of Materials					
	(i) Government permitted quarries to be used for excavation; (ii) Verify suitability of all material sources to be verified and approval of Investment PMU/PIU	SWM project site, Lekai, Dibrugarh	Contractor	Visual observation	DMSC, PIU	Used Quarry Sites and sources permitted by government. Verified suitability of all materials

Sl. No.	Mitigation Activities and Method	Location	Responsible for Mitigation	Monitoring Method	Responsible for Monitoring	Compliance Status
	to be obtained; (iii) If additional quarries are required after construction has started, written approval to be obtained from PMU/PIU					sources and obtained approval of PIU.
b)	Air Quality					
	(i) Consultation will be done with PMU /PIU/ DMSC stockpiling clay, soil, gravel etc. (ii) Ambient air Quality analysis to be done; (iii) Water spraying will be done in dry seasons and tarpaulins cover used for dump down exposed soil and stockpiled on site; (iv) All heavy machineries will be fitted with air pollution control device; (v) Tarpaulins to be used to cover sand and other loose material when transported by trucks.	Lekai Dibrugarh	Contractor	Visual Observation and testing results	DMSC; PMU, PIU	Materials and wastes are located at secure /designated locations. Air quality monitoring is carried out but not on regular basis. All submitted testing certificates are available with PIU and DMSC Regular water sprinkling is conducted at the sites during dry season. The PUCs are submitted by contractor. Appendix 7 shows sample copy Covered vehicles are used for transportation of materials

Sl. No.	Mitigation Activities and Method	Location	Responsible for Mitigation	Monitoring Method	Responsible for Monitoring	Compliance Status
c)	Surface Water Quality					
	<p>(i) To avoid stockpiling of earth filling during monsoon seasons unless covered with tarpaulin or plastic sheet;</p> <p>(ii) Reused of excess spoils will be prioritized and DMSC/PMU/PIU will be consulted in case of disposal;</p> <p>(iii) Fuels and Lubricants should be stored as per norms and keep away from water contact;</p> <p>(iv) Waste generated during construction activities should be disposed in designated areas only;</p> <p>(v) Surface water Quality inspection is done on regular basis and inspection will be made as per EMP only.</p>	At site and from nearby Sessa River.	Contractor	Laboratory Test and Visual Observation and Compliance to spoil management plant	DMSC;PMU, PIU	<p>Fuels and Lubricants are kept away from water contact. But contractors have not stored fuel and lubricants as per norms. Diesel/oil drums are not stored properly on paved concrete surface. Instruction has been given for improvement.</p> <p>Wastes generated during construction activities are disposed in designated areas only.</p> <p>Surface water Quality inspection is done. But monitoring is irregular not as per EMP and EC condition.</p> <p>Water monitoring is carried out but not on monthly basis and submitted result certificates are available with PIU and DMSC as back up</p>
d)	Noise Quality					
	<p>(i) Activities with the greatest potential to generate noise to be conducted during periods of the day which will result in least disturbance;</p> <p>(ii) Maximum sound levels not exceeding 80 decibels (dbA) when measured at a distance of 10 m or</p>	Lekai Dibrugarh	Contractor	Monitoring report	DMSC; PMU;, PIU	<p>Minimum sound level (below 80 db) is maintained at the site.</p> <p>Activities with high noise potential are not conducted during night time.</p> <p>Noise level monitoring is carried</p>

Sl. No.	Mitigation Activities and Method	Location	Responsible for Mitigation	Monitoring Method	Responsible for Monitoring	Compliance Status
	more from the vehicle/s to be maintained.					out but not on every month and submitted result certificates are available with PIU and DMSC as back up
e)	Traffic Management					
	Traffic flow to be avoided during construction activities.	Lekai Dibrugarh	Contractor	Visual observation and compliance to Traffic Management Plan	DMSC; PIU	Contractor to ensure traffic management plan implementation particularly during transportation of materials
f)	Ecological resources –Terrestrial					
	Minimize removal of vegetation/trees. If required permission to be taken from the Govt.	Lekai Dibrugarh	Contractor	Visual observation	DMSC; PIU	One tree needs to be cut at approach road. NOC obtained (Appendix 5) As per Consent To Establish trees must be planted around treatment plant and disposal facility; and around 600 numbers of saplings were planted on World Environment Day 2018.
g)	Existing Infrastructure and Facilities					
	(i) List to be obtained from PMU/PIU/DMSC of affected utilities and operators, if any; (ii) A contingency plan to be prepared to include actions to be done in case of unintentional interruption					No disruption of services or damage to existing infrastructure has taken place during the reporting period.

Sl. No.	Mitigation Activities and Method	Location	Responsible for Mitigation	Monitoring Method	Responsible for Monitoring	Compliance Status
	of service					
h)	Landscape and Aesthetics					
	<p>(i) Heavy duty vehicles, temporary structures at construction camps and stockpiles to be placed in a way that they do not impact the aesthetics of the sites;</p> <p>(ii) All wreckage, rubbish to be removed;</p> <p>(iii) Unwanted material and litter to be removed on frequent basis.</p>	Lekai Dibrugarh	Contractor	Visual Observation.	DMSC; PMU; PIU	<p>Parking area is specified for heavy vehicles at the sites. Adequate store facilities are provided at the work sites to store the stockpiles.</p> <p>All wreckage, rubbish, unwanted material and litter is removed on regular basis.</p> <p>Spoil Management Plans have been prepared and applied</p>
i)	Accessibility					
	<p>(i) Transport action routes to be planned so that heavy vehicles do not use narrow local roads, except in the immediate vicinity of delivery sites;</p> <p>(ii) Transport and hauling activities during to be scheduled during non- peak hours;</p> <p>(iii) Entry and exit points to be located in areas where there is low potential for traffic congestion;</p> <p>(iv) Full street closure to be avoided.</p>	Lekai Dibrugarh	Contractor	Visual observation and compliance to Traffic Management Plan – if any	DMSC;PIU	<p>Contractor ensured and implemented traffic management measures particularly during transportation of materials</p> <p>Isolated location no as such access problem</p>

Sl. No.	Mitigation Activities and Method	Location	Responsible for Mitigation	Monitoring Method	Responsible for Monitoring	Compliance Status
j)	Socio-Economic–Income.					
	(i) Generation of contractual employment and increase in local revenue; (ii) Signboards to be provided for pedestrians to inform nature and duration of construction work and contact numbers for concerns/complaints.	Lekai Dibrugarh	Contractor	Employment Record Visual observation	DMSC;PIU	A number of local people have been employed. Signboards are provided at project site
k)	Employment Generation					
	(i) Labor intensive construction measures to be used where appropriate; (ii) Local (unskilled) labor to be employed wherever possible; (iii) Adequate training to be provided to the labors to benefit individuals beyond completion of the subproject.	Lekai Dibrugarh	Contractor	Visual observation and Training reports	DMSC;PIU;PMU	Labour intensive construction measures are used where appropriate and local labours are employed wherever it is possible. HSE Trainings are provided to the labours by the contractors. Sample tool box talk document attached as Appendix 11 .
l)	Occupational Health and Safety					
	(i) A site-specific Health and Safety(H&S) Plan to be developed which will include measures such as: a.excluding public from the site; b.ensuring all workers are	Lekai Dibrugarh	Contractor	Compliance to respective Health and Safety Plans; visual observation; accident reports; medical	DMSC;PIU	Site specific health and safety plans have been prepared by the contractors. First Aid boxes are provided on the work sites. For any incidents

Sl. No.	Mitigation Activities and Method	Location	Responsible for Mitigation	Monitoring Method	Responsible for Monitoring	Compliance Status
	<p>provided with and use Personal Protective Equipment like helmet, gumboot, safety belt, gloves, and earplugs;</p> <p>c.H&S Training for all site personnel;</p> <p>d.documented procedures to be followed for all site activities ;and</p> <p>e.documentation of work-related accidents;</p> <p>(ii) Ensure that qualified first- aid can be provided at all times. Equipped first-aid stations shall be easily accessible throughout the project site;</p> <p>(iii) Medical insurance coverage to be provided for workers</p> <p>(iv) All installations to be secured from unauthorized intrusion and accident risks;</p> <p>(i) Potable drinking water to be supplied at working sites;</p> <p>(v) Clean eating areas to be provided where workers are not exposed to hazardous or noxious substances;</p> <p>(vi) H&S orientation training to be provided to all new workers to ensure that they are apprised of the basic site rules of work at the site, personal protective protection, and preventing injuring</p>			insurance documents, training reports,		<p>and accidents, accident reports are maintained on sites. During report period there is no as such accident/ first aid case reported</p> <p>Contractor has Employers Liability policy taken for their workers which is valid from 30/01/2018 till 29/01/2019. (Appendix 10)</p> <p>Work sites are secured. Caution tapes are provided at the work sites.</p> <p>Potable drinking water and separate eating areas are provided to the workers at the work sites.</p> <p>Periodical H&S trainings are provided to workers. Sample records of the training are attached as Appendix 11.</p> <p>The working sites do not have areas where hazardous conditions or substances may be present.</p> <p>Usages of PPE on sites are inadequate.</p>

SI. No.	Mitigation Activities and Method	Location	Responsible for Mitigation	Monitoring Method	Responsible for Monitoring	Compliance Status
	<p>to fellow workers;</p> <p>(vii) Visitor orientation to be provided if visitors to the site can gain access to areas where hazardous conditions or substances may be present. Ensure also that visitor/s do not enter hazard areas unescorted;</p> <p>(viii) Visibility of workers to be ensured through their use of high visibility vests when working in or walking through heavy equipment operating areas;</p> <p>(ix) Sign boards to be marked and provided for hazardous areas such as energized electrical devices and lines, service rooms housing high voltage equipment, and areas for storage and disposal. Signage shall be in accordance with international standards and be well known to, and easily understood by workers, visitors, and the general public as appropriate; and</p> <p>(x) Disallow worker exposure to noise level greater than 85 dBA for adoration of more than 8hours per day without hearing protection. The use of hearing protection shall be enforced actively.</p> <p>(xi)</p>					

Sl. No.	Mitigation Activities and Method	Location	Responsible for Mitigation	Monitoring Method	Responsible for Monitoring	Compliance Status
k)	Core Labor Standard (CLS)- safety and compliance					
	<p>(i) Any kind of occupational health impacts on the health of the labors to be avoided;</p> <p>(ii) Child labor and forced labor to be prohibited;</p> <p>(iii) Equal pay to be provided irrespective of gender, ethnicity and caste.</p>	Lekai Dibrugarh	Contractor	Periodic Medical Examinations reports, visual observation and employee record	DMSC;PIU	<p>Contractor's have a labour License to employ more than 20 employees valid from 02-02-2018 till 04-02-2019 (Appendix 13).</p> <p>Contractor organized periodic Medical Examinations. HIV awareness camps need to be organized. Sample health checkup report is attached as Appendix 14</p> <p>Child labor and forced labor are prohibited.</p> <p>Woman labours are not employed by the contractors.</p>
m)	Community Health and Safety					
	<p>(i) Routes to be planned so as to avoid times of peak-pedestrian activities;</p> <p>(ii) Liaise with PMU/PIU/DMSC in identifying high-risk areas on route cards/maps;</p> <p>(iii) Maintain regularly the vehicles and use of manufacturer-approved parts to minimize potentially serious accidents caused by equipment malfunction</p>	Lekai Dibrugarh	Contractor	Traffic management plans	DMSC ;PIU	<p>Contractor ensures and implements traffic management measures at the sites and during transportation of materials.</p> <p>No complaints have been received from pedestrians/ locals.</p> <p>Accidents, reports are maintained on sites. During report period there is no as such accident</p>

Sl. No.	Mitigation Activities and Method	Location	Responsible for Mitigation	Monitoring Method	Responsible for Monitoring	Compliance Status
	<p>or premature failure;</p> <p>(iv) Road signs and flag persons to be provided to warn;</p> <p>(v) Protective fencing to be provided around open trenches, and cover any open trench with metal planks during non- construction hours. Potentially cause soil contamination;</p> <p>(vi) Medical insurance coverage to be provided for workers</p>					reported
n)	Office, Work camps & Storage					
	<p>(i) Consultation with PIU/ DMSC to be done before locating project offices, sheds, and construction plants;</p> <p>(ii) Minimize removal of vegetation and disallow cutting of trees;</p> <p>(iii) Provide water and sanitation facilities for employees/labours;</p> <p>(iv) Separate Gents and Ladies toilet should be maintained;</p> <p>(v) Canteen should be provided for all staff;</p> <p>(vi) Employees to be prohibited from poaching wildlife and cutting of trees for firewood; and</p> <p>(vii) Train employees in the storage and handling of materials which</p>	Lekai Dibrugarh	Contractor	Visual observation	DMSC;PIU	<p>Site offices and labour camps are constructed at the project site.</p> <p>Adequate water and sanitation facilities are provided at sites.</p> <p>Contractor has to provide separate toilet for Gents and Ladies. Eating areas are provided for all staff and are kept clean.</p> <p>Employees are prohibited from poaching wildlife and cutting of trees for firewood.</p> <p>Diesel/oil drums are not stored properly on paved concrete surface.</p>

Sl. No.	Mitigation Activities and Method	Location	Responsible for Mitigation	Monitoring Method	Responsible for Monitoring	Compliance Status
	can potentially cause soil contamination					Employees are prohibited from poaching wildlife and cutting of trees for firewood.
o)	Social and Cultural Resources					
	(i) The protocol to be strictly followed for chance finds in any excavation work; (ii) PMU/PIU/DMSC or any authorized person to be requested with archaeological field training to observe excavation; (iii) Work to be stopped immediately to allow further investigation if any finds are suspected; and (iv) PMU/PIU/DMSC to be informed if a find is suspected and take any action they require ensuring its removal or protection in situ.	All sites	Contractor	Visual observation & record	DMSC, PIU	Currently not applicable

Table 11: Compliance of EMP and OH&S Norms. Package: Construction of Compound wall, River Protection Wall, Access Roads, Security Guard Room and Allied Works of Landfill site at Dibrugarh (AUIP/PR-1/DIB/SWM/01A)

Sl. No.	Mitigation Activities and Method	Location	Responsible for Mitigation	Monitoring Method	Responsible for Monitoring	Compliance Status
a)	Sources of Materials					
	(i) Government permitted quarries to be used for excavation; (ii) Verify suitability of all material sources	SWM project site, Lekai, Dibrugarh	Contractor	Visual observation	DMSC/PIU	Used Quarry Sites and sources permitted by government. Verified suitability of all

Sl. No.	Mitigation Activities and Method	Location	Responsible for Mitigation	Monitoring Method	Responsible for Monitoring	Compliance Status
	to be verified and approval of Investment PMU/PIU to be obtained; (iii) If additional quarries are required after construction has started, written approval to be obtained from PMU/PIU					materials sources and obtained approval of PIU.
b) Air Quality						
	(i) Consultation will be done with PMU /PIU/ DMSC stockpiling clay, soil, gravel etc. (ii) Ambient air Quality analysis to be done; (iii) Water spraying will be done in dry seasons and tarpaulins cover used for dump down exposed soil and stockpiled on site; (iv) All heavy machineries will be fitted with air pollution control device; (v) Tarpaulins to be used to cover sand and other loose material when transported by trucks.	Lekai Dibrugarh	Contractor	Visual Observation & record	DMSC/PMU/PIU	Materials and wastes are located at secure /designated locations. Air quality monitoring is carried out irregularly. All testing certificates are available with PIU and DMSC Regular water sprinkling is conducted at the sites during dry season. The PUCs are submitted by contractor. Appendix 7 shows sample copy Covered trucks are used for transportation of materials

Sl. No.	Mitigation Activities and Method	Location	Responsible for Mitigation	Monitoring Method	Responsible for Monitoring	Compliance Status
c)	Surface Water Quality					
	<p>(i) To avoid stockpiling of earth filling during monsoon seasons unless covered with tarpaulin or plastic sheet;</p> <p>(ii) Reused of excess spoils will be prioritized and DMSC/PMU/PIU will be consulted in case of disposal;</p> <p>(iii) Fuels and Lubricants should be stored as per norms and keep away from water contact;</p> <p>(iv) Waste generated during construction activities should be disposed in designated areas only;</p> <p>(v) Surface water Quality inspection is done on regular basis and inspection will be made as per EMP only.</p>	At site and from nearby Sessa River.	Contractor	Laboratory Test and Visual Observation and Compliance to spoil management plant	DMSC/PMU/PIU	<p>Fuels and Lubricants are kept away from water contact. But contractors have not stored fuel and lubricants as per norms. Diesel/oil drums are not stored properly on paved concrete surface</p> <p>Wastes generated during construction activities are disposed in designated areas only.</p> <p>Surface water Quality inspection is done on irregular basis and not as per EMP</p> <p>Water quality monitoring is carried out not for every month under Sanitary landfill project and result certificates are available with PIU and DMSC as back up</p>
d)	Noise Quality					
	<p>(i) Activities with the greatest potential to generate noise to be conducted during periods of the day which will result in least disturbance;</p> <p>(ii) Maximum sound levels not exceeding 80 decibels (dbA) when measured at a distance of 10 m or more from the vehicle/s to be maintained.</p>	Lekai Dibrugarh	Contractor	Monitoring report	DMSC/PMU/PIU	<p>Minimum sound level (below 80 db) is maintained at the site.</p> <p>Activities with high noise potential are not conducted during night time.</p> <p>Noise level monitoring is carried</p>

Sl. No.	Mitigation Activities and Method	Location	Responsible for Mitigation	Monitoring Method	Responsible for Monitoring	Compliance Status
						out, but not on every month under Sanitary landfill project and result certificates are available with PIU and DMSC as back up
e)	Traffic Management					
	Traffic flow to be avoided during construction activities.	Lekai Dibrugarh	Contractor	Visual observation and compliance to Traffic Management Plan	DMSC/PIU	Contractor to ensure traffic management plan implementation particularly during transportation of materials
f)	Ecological resources –Terrestrial					
	Minimize removal of vegetation/trees. If required permission to be taken from the Govt.	Lekai Dibrugarh	Contractor	Visual observation	DMSC/ PIU	Not required. (As per Consent To Establish trees must be planted around treatment plant and disposal facility; and around 600 numbers of saplings were planted on World Environment Day 2018.)
g)	Existing Infrastructure and Facilities					
	(i) List to be obtained from PMU/PIU/DMSC of affected utilities					No disruption of services or damage to existing

Sl. No.	Mitigation Activities and Method	Location	Responsible for Mitigation	Monitoring Method	Responsible for Monitoring	Compliance Status
	and operators, if any; (ii) A contingency plan to be prepared to include actions to be done in case of unintentional interruption of service					infrastructure has taken place during the reporting period.
h)	Landscape and Aesthetics					
	(i) Heavy duty vehicles, temporary structures at construction camps and stockpiles to be placed in a way that they do not impact the aesthetics of the sites; (ii) All wreckage, rubbish to be removed; (iii) Unwanted material and litter to be removed on frequent basis.	Lekai Dibrugarh	Contractor	Visual Observation.	DMSC/PMU/PIU	Parking area is specified for heavy vehicles at the sites. Adequate store facilities are provided at the work sites to store the stockpiles. All wreckage, rubbish, unwanted material and litter is removed on regular basis. Spoil Management Plans have been prepared and applied
i)	Accessibility					
	(i) Transport action routes to be planned so that heavy vehicles do not use narrow local roads, except in the immediate vicinity of delivery sites; (ii) Transport and hauling activities during to be scheduled during non- peak hours; (iii) Entry and exit points to be located in areas where there is low potential for traffic congestion; (iv) Full street closure to be avoided.	Lekai Dibrugarh	Contractor	Visual observation and compliance to Traffic Management Plan	DMSC/PIU	Contractor ensured and implemented traffic management measures particularly during transportation of materials Isolated location no as such access problem

Sl. No.	Mitigation Activities and Method	Location	Responsible for Mitigation	Monitoring Method	Responsible for Monitoring	Compliance Status
j)	Socio-Economic–Income.					
	(i) Generation of contractual employment and increase in local revenue; (ii) Signboards to be provided for pedestrians to inform nature and duration of construction work and contact numbers for concerns/complaints.	Lekai Dibrugarh	Contractor	Employment Record Visual observation	DMSC/PIU	A number of local people have been employed. Signboards are provided at all sites.
k)	Employment Generation					
	(i) Labor intensive construction measures to be used where appropriate; (ii) Local (unskilled) labor to be employed wherever possible; (iii) Adequate training to be provided to the labors to benefit individuals beyond completion of the subproject.	Lekai Dibrugarh	Contractor	Visual observation and Training reports	DMSC/PIU/AUIIP	Labour intensive construction measures are used where appropriate and local labours are employed wherever it is possible. Tool box talk not done by safety officer of the contractor. Instruction has been given for regular HSE training for workers
l)	Occupational Health and Safety					
	(i) A site-specific Health and Safety(H&S) Plan to be developed which will include measures such as: a. excluding public from the site; b. ensuring all workers are	Lekai Dibrugarh	Contractor	Compliance to respective Health and Safety Plans; visual observation;	DMSC/PIU	Site specific health and safety plans have been prepared by the contractors. Contractor not followed that HSE plan

Sl. No.	Mitigation Activities and Method	Location	Responsible for Mitigation	Monitoring Method	Responsible for Monitoring	Compliance Status
	<p>provided with and use Personal Protective Equipment like helmet, gumboot, safety belt, gloves, and earplugs;</p> <p>c. H&S Training for all site personnel;</p> <p>d. documented procedures to be followed for all site activities ;and</p> <p>e. documentation of work-related accidents;</p> <p>(ii) Ensure that qualified first- aid can be provided at all times. Equipped first-aid stations shall be easily accessible throughout the project site;</p> <p>(iii) Medical insurance coverage to be provided for workers</p> <p>(iv) All installations to be secured from unauthorized intrusion and accident risks;</p> <p>(v) Potable drinking water to be supplied at working sites;</p> <p>(vi) Clean eating areas to be provided where workers are not exposed to hazardous or noxious substances;</p> <p>(vii) H&S orientation training to be provided to all new workers to ensure that they are apprised of the basic site rules of work at the site, personal protective protection, and preventing injuring to fellow workers;</p>			<p>accident reports; medical insurance documents, training reports,</p>		<p>First Aid boxes are provided on the work sites. For any incidents and accidents, accident reports are maintained on sites. Sample First aid case attached as Appendix 16.</p> <p>Medical insurance coverage is provided by contractor and insurance policy for workers is valid upto 09/11/2019 (Appendix 10)</p> <p>Work sites are secured. Incomplete caution tape noted.</p> <p>Potable drinking water and separate eating areas are provided to the workers at the work sites.</p> <p>HSE training not provided to workers on regular basis.</p> <p>The working sites do not have areas where hazardous conditions or substances may be present.</p> <p>Usages of PPE on sites are inadequate.</p>

Sl. No.	Mitigation Activities and Method	Location	Responsible for Mitigation	Monitoring Method	Responsible for Monitoring	Compliance Status
	<p>(viii) Visitor orientation to be provided if visitors to the site can gain access to areas where hazardous conditions or substances may be present. Ensure also that visitor/s do not enter hazard areas unescorted;</p> <p>(ix) Visibility of workers to be ensured through their use of high visibility vests when working in or walking through heavy equipment operating areas;</p> <p>(x) Sign boards to be marked and provided for hazardous areas such as energized electrical devices and lines, service rooms housing high voltage equipment, and areas for storage and disposal. Signage shall be in accordance with international standards and be well known to, and easily understood by workers, visitors, and the general public as appropriate; and</p> <p>(xi) Disallow worker exposure to noise level greater than 85 dBA for adoration of more than 8hours per day without hearing protection. The use of hearing protection shall be enforced actively.</p>					

Sl. No.	Mitigation Activities and Method	Location	Responsible for Mitigation	Monitoring Method	Responsible for Monitoring	Compliance Status
k)	Core Labor Standard (CLS)- safety and compliance					
	<p>(i) Any kind of occupational health impacts on the health of the labors to be avoided;</p> <p>(ii) Child labor and forced labor to be prohibited;</p> <p>(iii) Equal pay to be provided irrespective of gender, ethnicity and caste.</p>	Lekai Dibrugarh	Contractor	Periodic Medical Examinations reports, visual observation and employee record	DMSC/PIU	<p>Contractor's have a labour License to employ more than 20 employees valid from 09.03-2018 till 08.03-2019 (Appendix 13).</p> <p>Contractor has not organized any health camp and HIV/AIDS awareness camp during this reporting period. Instruction has been given for immediate arrangement.</p> <p>Child labor and forced labor are prohibited.</p> <p>Woman labours are not employed by the contractors.</p>
m)	Community Health and Safety					
	<p>(i) Routes to be planned so as to avoid times of peak-pedestrian activities;</p> <p>(ii) Liaise with PMU/PIU/DMSC in identifying high-risk areas on route cards/maps;</p> <p>(iii) Maintain regularly the vehicles and use of manufacturer- approved parts to minimize potentially serious accidents caused by equipment malfunction or premature failure;</p>	Lekai Dibrugarh	Contractor	Traffic management plans	DMSC	<p>Contractor ensures and implements traffic management measures at the sites and during transportation of materials.</p> <p>No complaints have been received from pedestrians/ locals.</p>

Sl. No.	Mitigation Activities and Method	Location	Responsible for Mitigation	Monitoring Method	Responsible for Monitoring	Compliance Status
	<p>(iv) Road signs and flag persons to be provided to warn;</p> <p>(v) Protective fencing to be provided around open trenches, and cover any open trench with metal planks during non- construction hours. Potentially cause soil contamination;</p> <p>(vi) Medical insurance coverage to be provided for workers</p>					Accidents/ first aid reports are maintained on sites.
n)	Office, Work camps & Storage					
	<p>(i) Consultation with PIU/ DMSC to be done before locating project offices, sheds, and construction plants;</p> <p>(ii) Minimize removal of vegetation and disallow cutting of trees;</p> <p>(iii) Provide water and sanitation facilities for employees/labours;</p> <p>(iv) Separate Gents and Ladies toilet should be maintained;</p> <p>(v) Canteen should be provided for all staff;</p> <p>(vi) Employees to be prohibited from poaching wildlife and cutting of trees for firewood; and</p> <p>(vii) Train employees in the storage and handling of materials which can potentially cause soil contamination</p>	Lekai Dibrugarh	Contractor	Visual observation	DMSC/PIU	<p>Site offices and labour camps are constructed at the project site.</p> <p>Adequate water and sanitation facilities are provided in sites.</p> <p>Contractor has provided separate toilet for Gents and Ladies at the project site.</p> <p>Eating areas are provided for all staff and keep clean.</p> <p>Employees are prohibited from poaching wildlife and cutting of trees for firewood.</p> <p>Diesel/oil drums are not stored properly on paved concrete</p>

Sl. No.	Mitigation Activities and Method	Location	Responsible for Mitigation	Monitoring Method	Responsible for Monitoring	Compliance Status
						<p>surface.</p> <p>Employees are prohibited from poaching wildlife and cutting of trees for firewood.</p>
o)	Social and Cultural Resources					
	<p>(i) The protocol to be strictly followed for chance finds in any excavation work;</p> <p>(ii) PMU/PIU/DMSC or any authorized person to be requested with archaeological field training to observe excavation;</p> <p>(iii) Work to be stopped immediately to allow further investigation if any finds are suspected; and</p> <p>(iv) PMU/PIU/DMSC to be informed if a find is suspected and take any action they require ensuring its removal or protection in situ.</p>	All working sites	Contractor	Visual observation & record	DMSC, PIU	Currently not applicable

IV. ENVIRONMENTAL MONITORING AND EVALUATION

31. During report period air quality monitoring has been conducted for 4 running packages under Tranche 1. As per consent to establish issued by Pollution Control Board, Assam for SWM project Dibrugarh ambient air quality monitoring have been carried out by the contractors for both packages and submitted to PIU. Particularly for SWM project monitoring needs to be conducted on monthly basis but contractors are not followed the schedule. Instruction has been given for monthly monitoring of air, water and noise.

32. All contractors have health and safety budget for implementation of EMP and monitoring of pollution parameters.

33. Results of air quality monitoring done during report period are shown in **Table 12** below. Value of all air quality parameters are within the standard levels. Concentration of PM₁₀ and PM_{2.5} are more or less within the standard. Concentration of SO₂ and NO₂ are below the detection limit at SWM landfill site. Strict application of EMP is necessary to control air pollution.

Table 12: Ambient air quality monitoring result

Package	Site name/ Date of Monitoring	Status of Ambient Air Quality			
		Air pollutants (µg/m ³)			
		RSPM-PM ₁₀	RSPM-PM _{2.5}	SO ₂	NO ₂
		CPCB standard 100	CPCB standard 60	CPCB standard 80	CPCB standard 80
Constriction of Water supply, Transmission Main Pipelines and allied work in Guwahati- AU IIP/PR-1/GUW/WS/01	Sunchali/ 05.11.2018	86.0	47.0	11.0	45.0
	Barbari/ 15.09.2018	98.0	55.0	10.0	48.0
Construction of storage reservoirs of various capacities at three locations, approach road and allied works in South East Guwahati Water Supply Project. AU IIP/PR-1/GUW/WS/02A	Gopalnagar Reservoir site/15.12.2018	89.0	54.0	5.0	8.0
	North Jyoti nagar Reservoir site/ 15.12.2018	87.0	51.0	<5.0	7.0
Design Build of 100 MT processing plant and 60 MT sanitary land fill site and allied works at Dibrugarh AU IIP/PR-1/DIB/SWM/01B	July month- North side/ 05.07.2018	53.9	24.2	BDL	BDL
	July month- South side/ 06.07.2018	65.5	31.6	BDL	BDL
	July month- East side/ 05.07.2018	63.0	29.6	BDL	BDL
	July month- West side/ 06.07.2018	62.2	20.4	BDL	BDL
	August month - North side/ 05.08.2018	53.2	22.4	BDL	BDL
	August month - South side/ 06.08.2018	65.2	30.6	BDL	BDL
	August month - East side/	62.1	28.1	BDL	BDL

Package	Site name/ Date of Monitoring	Status of Ambient Air Quality			
		Air pollutants ($\mu\text{g}/\text{m}^3$)			
		RSPM- PM ₁₀	RSPM- PM _{2.5}	SO ₂	NO ₂
		CPCB standard 100	CPCB standard 60	CPCB standard 80	CPCB standard 80
	05.08.2018				
	August month - West side/ 06.08.2018	60.2	21.4	BDL	BDL
	September month- North side/ 05.09.2018	52.1	24.3	BDL	BDL
	September month - South side/ 06.09.2018	66.2	29.4	BDL	BDL
	September month - East side/ 05.09.2018	63.0	27.0	BDL	BDL
	September month- West side/ 06.09.2018	61.5	21.5	BDL	BDL
	December month- North side/ 06.12.2018	53.1	22.4	BDL	BDL
	December month- South side/ 06.12.2018	64.2	30.6	BDL	BDL
	December month- East side/ 06.12.2018	61.0	27.1	BDL	BDL
	December month- West side/ 06.12.2018	60.2	21.3	BDL	BDL
Construction of Compound wall, River Protection Wall, Access Roads, Security Guard Room and Allied Works of Landfill site at Dibrugarh AUIIP/PR-1/DIB/SWM/01A	September month- North side/ 25.09.2018	54.3	18.1	BDL	BDL
	September month - South side/ 25.09.2018	58.6	19.3	BDL	BDL
	September month - East side/ 25.09.2018	53.2	18.4	BDL	BDL
	September month- West side/ 25.09.2018	61.4	19.8	BDL	BDL

(Note: All monitoring done during report period)

34. During report period noise level monitoring has been conducted for all 4 running packages under Tranche 1.

35. The measured noise levels are provided in **Table 13** below. It is noted from the data below that noise levels are within the standard except few pipe laying areas. In few cases high noise level is due to movement of heavy traffic within the project area. Noise level at Electrical substation site is comparatively less and which due to isolate nearby vacant

location. The generation of noise is mainly due to commercial and human activities. Control of equipment and vehicle noise is necessary for overall minimization of the noise level.

Table 13: Ambient Noise Level Monitoring Data at Project Location Sites and Surroundings

Package	Monitoring Locations	Noise Level in dB (A)		National Standard	
		Leq Day time Average	Leq Night Time Average		
Constriction of Water supply, Transmission Main Pipelines and allied work in Guwahati- AUIIP/PR-1/GUW/WS/01	Sunchali/ 05.11.2018	53.0	44.0	For Residential: Day: 55 db(A) Night: 45 db (A)	
	Barbari/ 15.09.2018	63.0	53.0		
Construction of storage reservoirs of various capacities at three locations, approach road and allied works in South East Guwahati Water Supply Project. AUIIP/PR-1/GUW/WS/02A	Gopalnagar Reservoir Site office/ 15.12.2018	54.6	42.4	For Residential: Day: 55 db(A) Night: 45 db (A)	
	Gopalnagar near Reservoir / 15.12.2018-	64.3	43.7		
	Gopalnagar Reservoir East side/ 15.12.2018	62.5	42.6		For Commercial: Day: 65 db(A) Night: 55 db (A)
	Gopalnagar Reservoir West side/ 15.12.2018	64.1	42.5		
	Gopalnagar Reservoir North side/ 15.12.2018	63.2	41.9		
	Gopalnagar Reservoir South side/ 15.12.2018	63.8	42.3		
	Gopalnagar Reservoir Gate/ 15.12.2018	65.4	42.9		
	North Jyoti Nagar Reservoir Site office/ 15.12.2018	55.5	42.2	For Residential: Day: 55 db(A) Night: 45 db (A)	
	North Jyoti Nagar near Reservoir / 15.12.2018-	65.2	42.9		
	North Jyoti Nagar Reservoir East side/ 15.12.2018	63.6	41.8		For Commercial: Day: 65 db(A) Night: 55 db (A)
	North Jyoti Nagar Reservoir West side/ 15.12.2018	63.9	42.3		
	North Jyoti Nagar Reservoir North side/ 15.12.2018	64.3	42.6		
	North Jyoti Nagar Reservoir South side/ 15.12.2018	64.1	42.9		
	North Jyoti Nagar Reservoir Gate/ 15.12.2018	64.8	42.7		
Design Build of 100 MT processing plant and 60 MT sanitary land fill site and allied works at Dibrugarh	July month- North side/ 05.07.2018	54.8	40.5	For Residential: Day: 55 db(A) Night: 45 db (A)	
	July month- South side/ 05.07.2018	54.5	41.7		
	July month- East side/ 05.07.2018	45.0	31.9		

Package	Monitoring Locations	Noise Level in dB (A)		National Standard
		Leq Day time Average	Leq Night Time Average	
AUIIP/PR-1/DIB/SWM/01B	July month- West side/ 05.07.2018	45.8	31.8	For Commercial: Day: 65 db(A) Night: 55 db (A)
	August month -North side/ 05.08.2018	55.5	41.2	For Residential: Day: 55 db(A) Night: 45 db (A)
	August month -South side/ 05.08.2018	55.0	41.0	For Commercial: Day: 65 db(A) Night: 55 db (A)
	August month -East side/ 05.08.2018	46.0	32.3	For Residential: Day: 55 db(A) Night: 45 db (A)
	August month -West side/ 05.08.2018	45.1	31.3	For Commercial: Day: 65 db(A) Night: 55 db (A)
	September month- North side/ 05.09.2018	54.5	40.3	For Residential: Day: 55 db(A) Night: 45 db (A)
	September month - South side/ 05.09.2018	55.4	40.0	For Commercial: Day: 65 db(A) Night: 55 db (A)
	September month - East side/ 05.09.2018	44.1	30.1	For Residential: Day: 55 db(A) Night: 45 db (A)
	September month- West side/ 05.09.2018	44.7	30.6	For Commercial: Day: 65 db(A) Night: 55 db (A)
	December month- North side/ 06.12.2018	53.9	40.2	For Residential: Day: 55 db(A) Night: 45 db (A)
	December month- South side/ 06.12.2018	55.4	41.4	For Commercial: Day: 65 db(A) Night: 55 db (A)
	December month- East side/ 06.12.2018	45.7	31.2	For Residential: Day: 55 db(A) Night: 45 db (A)
	December month- West side/ 06.12.2018	45.7	31.0	For Commercial: Day: 65 db(A) Night: 55 db (A)

(Note: All monitoring done during report period)

36. As per consent to establish issued by Pollution Control Board, Assam for SWM project Dibrugarh ground water and surface quality monitoring have been carried out by the contractor, but not on monthly basis and results submitted to PIU.

37. The groundwater (from tube wells) samples were analyzed for physiochemical parameters and the test results showed that the groundwater is not contaminated due to the construction activities at these sites. The monitoring reports from July to December 2018 are shown in **Appendix 17**. Nearby river water quality is also monitored along with ground water. Testing results indicate that there is no contamination of surface water from construction activity. All report certificates are attached in **Appendix 17**.

38. A performance monitoring fact sheet has been prepared to facilitate tracking and quick reference on environmental monitoring of **Tranche 1** subproject packages. (**Tables 14**).

Table 14: Performance Fact Sheet for EMP Implementation of AUIIP Tranche 1 (Package-wise)

	Package Number	Name of Contractor	EMP Part of contract Document(Yes / No)	Availability of HSE person	Overall Status of EMP Implementation	Field to be Monitored as per EMP												
						Source of Materials	Camp Sites	Landscape and Aesthetics	Air Quality	Noise Level	Traffic	Ecological Resources – Terrestrial	Accessibility	Water Quality	Occupational Health & safety	Community Health & safety	Socio cultural resources	Employment generation
						In compliance (2) / Partial Compliance (1) / Not in compliance (0) / Not applicable (n/a)												
1	AUIIP/PR-1/GUW/WS/01	M/s Tirupati Cement Products	Yes	Yes	Complied	2	2	2	2	2	2	n/a	2	n/a	2	2	n/a	2
2	AUIIP/PR-1/GUW/WS/02A	M/S Shivam Transcon Pvt Ltd	Yes	Yes	Complied	2	2	1	2	2	n/a	2	2	n/a	1	2	n/a	2
3	AUIIP/PR-1/DIB/SWM-01A	M/s Badri Rai&Co.	Yes	Yes*	Partially Complied	2	1	2	1	1	n/a	2	2	1	0	2	n/a	2
4	AUIIP/PR-1/DIB/SWM-01B	M/s Milan Dutta- Blackberry Overseas Pvt.Ltd.-Alfa-Thermaltd.(Jv)	Yes	Yes	Complied	2	1	2	1	1	n/a	2	2	1	1	2	n/a	2

* Note: HSE Officer not available on regular basis.

Note calculation of numerical value for determining performance status- Calculation is based on addition of numerical value like below-

AUIIP/PR-1/GUW/WS/01 Total score- 2+2+2+2+2+2+2+2+2+2= 20. Number of working field=10, **Then- 20/10=2- More than 1.5, fully complied**

AUIIP/PR-1/GUW/WS/02A = Total score- 2+2+1+2+2+2+2+1+2+2= 18. Number of working field=10, **Then- 18/10=1.8- More than 1.5, fully complied**

AUIIP/PR-1/DIB/SWM-01A Total score – 2+1+2+1+1+2+2+1+0+2+2=16. Number of working field =11, **Then 16/11=1.45-Less than 1.5, Partially complied.**

AUIIP/PR-1/DIB/SWM-01B Total score – 2+1+2+1+1+2+2+1 +1+2+2=17.Number of working field=11, **Then 17/11=1.55-More than 1.5, Just complied.**

V. CONSULTATIONS AND DISCLOSURES CONDUCTED

39. As per approved IEE, consultations and disclosure will be a continuous process throughout **Tranche 1** implementation involving public consultations and focus group discussions. Regular tool box training for labourer are conducted by contractors. HIV/ AIDS awareness camp have also been organized by the water reservoir contractor at Guwahati.

40. The indicative schedule for consultations and disclosure is presented in **Table 15**. **Appendix 18** shows sample consultation sheet as provided by the contractor.

41. During consultation the issues will be discussed like,

- Availability of alignment
- Possible short term impact- accessibility
- Application of mitigation measures for control of dust and noise

Table 15: Indicative Schedule for Consultations and Disclosure

Type of Consultation/ Disclosure	Target Date	Location	Target Participants	Responsible Person and Source of Funds
Local level consultation	Weekly – to be continued	At all construction locations	General public, shop keepers, pedestrian population	Construction supervisor, Environment & safety officer of contractor, Environmental officer of PIU Project budget – continuous process
Consultation – safety issues, implementation of EMP	Quarterly – Within January to March 2019	At PMU/PIU office and project site office	DMSC's Supervisor Engineer, PIU Engineer, all safety and environment staff of contractors	Environmental specialist of DMSC and Environmental Safeguard Officer of PMU

42. Review and training program on safety and environment has been arranged for contractors, supervisors by Environment Safeguard Officer of PMU and DMSC's Environmental Specialist on regular basis. **Appendix 12** shows such training details during the report period.

43. The activities carried out for public consultation and public awareness on environmental safeguards for the transmission main lines project in Guwahati for the reporting period is given in **Appendix 18**. In the transmission main lines project, laying of underground transmission main lines and taking over of 700 mm dia pipe are required through the Basistha temple premises towards the wooden bridge of the Basistha River. In this connection, a meeting was held on 21st December 2018 with the Basistha Debaloy Parichalana Samity. In the said meeting, ADC Kamrup Metropolitan District and Circle Officer, Basistha were present and suggested AUJIP to obtain a consent from the Archaeology Department which is under the jurisdiction of the Directorate of Archaeology which is under process.

44. The sample attendance sheets and photographs of public consultations conducted by PIU & PMU officials at different locations at Transmission Mains are also appended as **Appendix 18**. Detail of the consultations and awareness program arranged by PIU at and near sanitary landfill site Dibrugarh shown in **Appendix 18**.

VI. GRIEVANCE REDRESS MECHANISM

45. The grievance redress committee has been constituted on 1st July 2015 for Guwahati as well as for the Dibrugarh. The notification is attached as **Appendix 19**.

46. The stakeholders are being informed about the Grievance Redress Mechanism (GRM) through public awareness campaigns. The project information leaflet has been prepared that contains information on the GRM, the contact phone number and address of the PIU. The PMU Safeguard Officer is responsible for processing and placing the all the papers before the GRC, maintaining the database of complaints, recording the decision, issuing minutes of the meetings and monitoring that decision are implemented. During the reporting period, July, 2018 – December, 2018 no grievances related to environment safeguards issue has been reported.

VII. OBSERVATIONS AND RECOMMENDATIONS

47. As presented in this report, Tranche 1 of this Investment Program being implemented in compliance with the loan covenants, subproject selection criteria and overall EARF. There are some non-compliant EMP activities noticed in the monitoring report in each sub-project, for which Corrective Action Plans have been prepared and is presented in **Table 16**.

Table 96: Corrective Action Plans for the Tranche 1 sub-projects

Sl No.	Non-compliance	Action Required	Responsibility	Target Date	Indicator of Compliance
Package: Construction of Water supply Transmission Main Pipelines and allied work in Guwahati					
1.	Incomplete use of PPEs by workers	The contractor to ensure the use of PPE on site.	Contractor	Immediate and to be continued	Workers wearing PPE during working.
2.	Partial use of caution tape at working site	The contractor to ensure community safety	Contractor	Immediate and to be continued	No compliant from local people/pedestrian
3.	Non submission of traffic management plan on quarterly basis with location map	Submission of traffic management plan with map showing partial and complete road closure	Contractor	Immediate and quarterly basis	Implementation of traffic management plan and maintaining proper access of local/ pedestrian
4	Meaningful public consultation at working location on regular basis is not done	Public consultation needs to be conducted on regular basis	Contractor	Immediate and to be continued	Record of consultation and inclusion of suggestion from local people
5	Only "Man & Women work" and road closure board available at pipe laying site. No	Immediate arrangement of proper display board at all active	Contractor	Immediate and to be continued	Availability of board at working site

Sl No.	Non-compliance	Action Required	Responsibility	Target Date	Indicator of Compliance
	contact number available in display board	construction sites. Safety signage should be placed at all construction sites. Contact no. needs to be included in board			
Package: Construction of storage reservoirs of various capacities at three locations (Gopal Nagar, NorthJyoti Nagar, Kenduguri), approach road and allied works in South East Guwahati Water Supply Project					
1.	PPE such as helmet, gumboot, safety belt, gloves, nose mask and earplugs are provided to the workers by the contractor. Partial use of PPEs noted	The contractor to ensure the use of PPE on site.	Contractor	Immediate and to be continued	Workers wearing PPE during working.
2	The contractor conducts Public consultation among the nearby residents about topics covering environment, health and safety. However, it is observed that most of the consultations are done with the same type of people.	The contractor to try to include different people in these consultations.	Contractor	During next consultations and to be continued	More people included in consultations.
3	Irregular training for workers. Tool box talk not recorded	Induction training and tool box talk on regular basis with proper record	Contractor	Immediate and to be continued	Training record and application
4	Improper storage of fuel noted. No oil tray available	Immediate placement of oil tray below the fuel drum	Contractor	Immediate	Placement of tray below fuel storage drum and non contamination of soil
5	Insufficient Workmen Compensation Policy	Immediate arrangement of WC policy as per rule	Contractor	Within 15th February 2019	WC policy document
Package: Design Build of 100 MT processing plant and 60 MT sanitary land fill site and allied works at Dibrugarh					
1	The contractor does not provide adequate numbers of PPE to the labourers and partial use by them	The contractor to provide adequate numbers of PPE to the workers and	Contractor	Immediate and to be continued.	Workers wearing PPE during working.

SI No.	Non-compliance	Action Required	Responsibility	Target Date	Indicator of Compliance
		also to ensure the use of PPE on site.			
2	Diesel/oil drums are not stored properly on paved concrete surface.	Separate concrete platforms with containment to be constructed in order to store the Diesel/oil drums on site.	Contractor	Immediate	Construction of concrete platform with containment to be constructed in order to store the Diesel/oil drums on site.
3	The contractor has not provided separate toilets for Gents and Ladies workers. Also access to toilet is blocked	Separate toilets for Gents and Ladies workers to be constructed. Proper access need to be maintained	Contractor	Immediate	Construction of separate toilets for Gents and Ladies workers and proper access
4	Monitoring of air quality, water quality and noise level not done on regular monthly basis	Monitoring should be done on monthly basis as per EC condition	Contractor	Immediate	Monitoring result
5	Electrical wire within the ground at welding workshop area.	All wire should be above the ground	Contractor	Immediate	Proper electrical installation
Package: Construction of Compound Wall, River Protection etc					
1	Non availability of dedicated Environment, health and safety officer	Regular monitoring and reporting by HSE officer or engagement of dedicated HSE officer for the project	Contractor	Immediate	Availability of HSE officer and document submission
2	Irregular or no submission of monthly and weekly environment monitoring report	Regular submission of monitoring report needs to be ensured	Contractor	Immediate and to be continued.	Monthly and weekly monitoring report submitted
3	Monitoring of air quality, water quality and noise level not done on regular monthly basis	Monitoring should be done on monthly basis as per EC condition	Contractor	Immediate	Monitoring result
4	The contractor does not provide adequate numbers of PPE to the labouers. Practically no use of	The contractor to provide adequate numbers of	Contractor	Immediate and to be continued.	Workers wearing PPE during working.

SI No.	Non-compliance	Action Required	Responsibility	Target Date	Indicator of Compliance
	PPEs	PPE to the workers and also to ensure the use of PPE on site.			
5	Inadequate storage of fuel just exit of office room. No platform and oil tray	Separate storage and concrete platforms with containment to be constructed in order to store the Diesel/oil drums on site.	Contractor	Immediate	Construction of concrete platform with containment to be constructed in order to store the Diesel/oil drums on site.
6	No as such bed provided to workers in the labour camp	Immediate arrangement of bed in sufficient numbers	Contractor	Immediate	Availability of standard bed for workers
7	No tool box talk arranged by safety officer	Regular arrangement of Tool box talk for workers	Contractor	Immediate and continued	Tool box talk record
8	Health checkup camp and HIV/ AIDS awareness program for workers not conducted during report period	Immediate arrangement of health checkup camp and HIV/AIDS awareness program for workers	Contractor	Within 15 th February	Photographs and report

48. Necessary instructions have been given to the Contractor by DMSC/PMU to specifically focus on safety aspects, and in general on EMP measures to improve the compliance.

49. During last ADB mission for Tranche 1 AUHIP from 19th to 22nd November 2018 some observations have been pointed out by Environment Expert of ADB. "Corrective Action Plan" for Environmental Safeguards as per Aide Memoire of ADB disclosed in **Appendix 20**.

APPENDICES

Appendix 1: Photo Illustration

Package: Construction of transmission water supply pipelines and allied works in Guwahati



Joining of pipe by welding at VIP road



Lowering of pipe for laying



Cleaning of the road after filling of trench



Temporary road restoration at VIP road



Partial use of PPEs by workers at Barbari site micro tunneling area



Road closure board noted at Barbari. No contact number available in board



Permanent barricade arranged at pipe laying area of Barbari. Deep excavation noted



Trench Less Work at Railway crossing near IOCL, Noonmati in progress



Shoring is noted for pipe laying. Area closed by caution tape



First aid box noted at work site

Package: Construction of water storage reservoir-Gopalnagar, North Jyoti Nagar & Kenduguri



Shuttering works of Retaining wall (Extended Portion) at Gopal Nagar in Progress



Preparation of Bed for Stone pitching behind Retaining wall at Gopal Nagar in Progress



Final stage reservoir construction work continued at Gopalnagar



Stone/ boulders after utilization needs to be removed from work site



Display of the contract number of project person noted at Gopalnagar reservoir site



Storage of fuel noted within close room. No use of oil tray below the fuel drum. Land contaminated.



First aid box noted at Gopalnagar reservoir site



Toilet facility at Gopalnagar site adjacent to labour camp



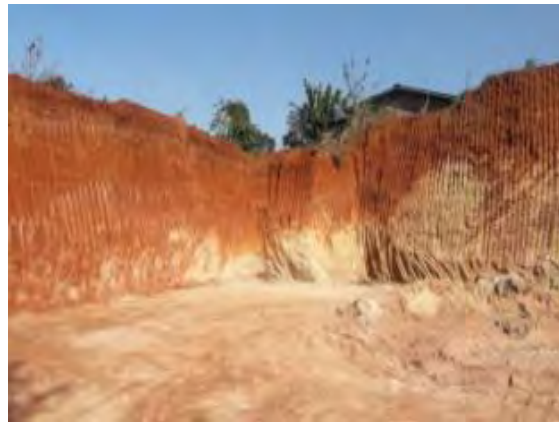
Excavation of Soil for Construction of Retaining wall at Kenduguri Reservoir site is in progress



Earth cutting done for approach road at North Jyoti nagar reservoir site



Approach road under construction



Earth cutting done for reservoir

Package: Build and Operate 100MT solid waste processing plant & 60MT sanitary landfill and allied works at Dibrugarh



Project display board noted. Grievance redressal contact no. shown in the board



Safety signage noted at project office



Scrap materials are stored properly



First aid box available at site office



Fuel stored in separate storage but no oil tray noted below the fuel storage drum



Fire extinguisher noted at office and near the fuel store



Worker camp at project site



Administrative building under construction at landfill site



Dust suppression through water sprinkling done. Which needs to be continued as per requirement



Use of PPEs during construction – noted

Package: Construction of Compound wall, River Protection Wall, Access Roads, Security Guard Room and Allied Works of Landfill site at Dibrugarh



Boundary wall under construction. No use of PPEs by workers



Compound wall of landfill constructed



Security Guard room under construction



Proper project display board noted



No use of PPEs by workers during rod cutting and bending



Solid waste collected within dustbin



Toilet facility for workers



Labour camp. No proper bed

Appendix 2: CTE for setting up 100 TPD MSW treatment and 60 MT sanitary landfill facility and compliance



**Pollution Control Board:: Assam
Bamunimaidam; Guwahati-21**

(An ISO 9001:2008 & BS OHSAS 18001:2007 Standard Certified Organization)

Phone: 0361-2652774 & 2550258; Fax: 0361-2550259

Website: www.pcbassam.org

Secy PMU
P.L.
9/12/16

No WB/OTWA/MSW-91/16-17/46



Dated Guwahati the 9/12/2016

"CONSENT TO ESTABLISH"

"CONSENT TO ESTABLISH" is hereby granted to **INTEGRATED SOLID WASTE MANAGEMENT FOR DIBRUGARH, DIBRUGARH MUNICIPAL BOARD** for setting up a **100 TPD MSW Treatment and 60 MT Sanitary Landfill Facility** located at Lekai, Ghoramara, Dist.: Dibrugarh (Assam) under Section 25 of Water (Prevention & Control of Pollution) Act, 1974 and Section 21 of Air (Prevention & Control of Pollution) Act, 1981 under the following terms & conditions:

1. No Air, Water, Soil pollution shall be created by the industry beyond the permissible limits prescribed by the Board. The industry would incorporate adequate pollution control measures before they put the plant into operation.
2. To maintain the environment and ecology in the area provisions for planting selected species of tree within the compound and approaches along with provisions for park, garden and fountain shall have to be made. Massive afforestation will have to be made by the industry in the factory and township if any.
3. As per provisions of Water (Prevention & Control of Pollution) Act, 1974 and Air (Prevention & Control of Pollution) Act, 1981 any officer, employed by this Board on its behalf shall without any interruption, the right at any time to enter the industry for inspection, to take samples for analysis and any call for any information etc. violation of this right will be withdrawal of this permission.
4. As per provisions of the Act, regular monitoring is to be done by the industry from the location/points fixed by the Board and the report to be submitted to the board monthly.
5. Effluent carrying drains must be segregated from storm water drain and effluent must be disposed in effluent pond in no case effluent will be allowed to discharge into nearby nullah/natural water course etc. without treatment and bringing it within permissible limits fixed by the Board.
6. Standard linings on flat embankment of effluent pond shall have to be provided to prevent and control of overflow seepage and leakage of effluent to the nearby areas.
7. To regularise the subsequent, the legal provisions of "Consent to Operate" as per Act and Cess Returns as per Cess Act, 1977 shall have to timely adhered to.
8. Gaseous pollution due to the burning of fuel to run engine boiler, etc. should be controlled by adopting preventive measures adequately.
9. Solid waste that arises during the operation should be properly graded and disposed of scientifically without causing nuisances.
10. For Low lying areas, special care is to be taken by the plant to prevent any overflow, seepage and leakage of effluent.


Compliance with CTE conditions for setting up 100 TPD MSW treatment and 60 MT sanitary landfill facility


Sl. No.	Compliance requirements-CTE conditions	Comments	Remarks/Action Plan
01.	No Air, Water, Soil pollution shall be created by the industry beyond the permissible limits prescribed by the Board. The industry would incorporate adequate pollution control measures before they put the plant into operation.	Agreed	Necessary action will be taken to incorporate adequate pollution control measures as agreed in the EIA.
02.	To maintain the environment and ecology in the area provisions for planting selected species of tree within the compound and approaches along with provisions for park, garden and fountain shall have to be made by the industry in the factory and township if any.	Agreed	Provision is already there to create buffer zone and plantation of trees.
03.	As per provisions of Water Act, 1974 and Air Act, 1981 any officer, employed by this Board on its behalf shall without any interruption, the right at any time to enter the industry for inspection, to take samples for analysis and any call for any information etc. violation of this right will be withdrawal of this permission.	Agreed	No comment
04.	As per provisions of the Act, regular monitoring is to be done by the industry from the locations/points fixed by the Board and the report to be submitted to the board monthly.	Agreed	Regular monitoring will be done from locations /points fixed by the board.
05.	Effluent carrying drains must be segregated from storm water drain and effluent must be disposed in effluent pond in no case effluent will be allowed to discharge into nearby nullah/natural water course etc. without treatment and bringing it within permissible limits fixed by the Board.	Agreed	As per design, the storm water and effluent drains are segregated and provision of leachate treatment plant is provided.
06.	Standard linings on flat embankment of effluent pond shall have to be provided to prevent and control of overflow seepage and leakage of effluent to the nearby areas.	Agreed	Secured landfill will be made as per norms.
07.	To regularize the subsequent, the legal provisions of "Consent to Operate" as per Act and Cess Returns as per Cess Act, 1977 shall have to timely adhered to.	Agreed.	Will be adhered from time to time.
08.	Gaseous pollution due to the burning of fuel to run engine boiler. Etc. should be controlled by adopting preventive measures adequately.	Agreed	There will be no boiler. However, emissions from DG sets will be controlled.
09.	Solid waste that arises during the operation should be properly graded and disposed of scientifically without causing nuisances.	Agreed	This is a Municipal solid composting plant and segregation will be done at the source itself.
10.	For Low lying areas, special care is to be taken by the plant to prevent any overflow seepage and leakage of effluent.	Agreed	No comment
11.	Fire warning (Alarm, Siren) is to be installed	Agreed	Provision has already

Sl. No.	Compliance requirements-CTE conditions	Comments	Remarks/Action Plan
	by the unit to guard against accidental pollution/mishap together with fire fighting devices.		been made.
12.	All pipe connection, Joints, fittings etc. in the factory and plant are to be frequently checked and shall be leak proof all the time	Agreed	No comment
13.	Proper housekeeping and adequate maintenance has to be ensured/enforced as per provisions of Acts	Agreed	Since it a municipal solid waste treatment plant, proper housekeeping will be ensured.
14.	All unwanted Toxic Chemical/Fluid/Gases are to be neutralized and flared up as necessary.	Agreed	No comment
15.	Production process is to be monitored and in the event of danger immediate shut down is to be ensured by the industry.	Agreed	No comment
16.	"Consent to Establish" has been issued basing on the particulars furnished by the applicant and subject to imposition to further/more conditions if warranted by the subsequent development.	Agreed	No comment
17.	"Consent to Establish" will be valid till date of commissioning of the unit or (five) years whichever is earlier.	Agreed	No comment
18.	Healthy working environment for the worker must be maintained and there should not be health Hazard to the workers for in adequate arrangement for ventilation, dust removal arrangements should be adequate and full proof for the health of the workers. Their health should be regularly monitored.	Agreed	Periodic medical checkup will be conducted.
19.	The unit must submit compliance report of action taken on the conditions given by the Board before commissioning the unit.	Agreed	No comment
20.	Adequate tress should be planted and maintained in the vacant space of the premises and all around the factory and township if any.	Agreed	Tree plantation will be made as stated earlier.
21.	The Board will be at liberty to withdraw the "Consent to Establish" at any time without notice, if necessary steps for prevention of pollution and prevention of environment are not taken by the industry as per mentioned conditions.	Agreed	No comment
22.	This issuance of the "Consent to Establish" dies not convey any property right in their real or personal property or any exclusive privileges nor does it authorize any injury to private property nor any invasion right any infringement of Central, State or Local Laws or Regulations.	Agreed	No comment
23.	The "Consent to Establish" does not authorize or approve the construction of any physical structures or facilities or the undertaking of any work in any natural watercourse except of the works specially instructed herein.	Agreed	No comment
24.	Chimney height must be as per CPCB	Agreed	There will be only DG

Sl. No.	Compliance requirements-CTE conditions	Comments	Remarks/Action Plan
	standards (minimum 30 mtrs. Height)		sets and the chimney heights of the same will be as per norms.
25.	The industry shall not discharge any solid or liquid wastes outside the campus without proper treatment.	Agreed	Provision of leachate treatment is available.
26.	Necessary steps are to be taken to maintain Ambient Air Quality standards in respect of Noise as per the Noise Pollution (Regulation and Control) Rules, 2000 as amended till date.	Agreed	No comment
27.	The industry must comply to the National Ambient Air Quality Standards as per Schedule-VII under Rule, 3(B) of the Environment (Protection) Rules, 1986.	Agreed	No comment
28.	Adequate fire fighting with fittings like fire hydrant etc. shall have to be provided in order to prevent fire hazard.	Agreed	Provision of fire fighting is already made.
29.	The wall with sufficient height should be constructed in around the plant premises to prevent noise pollution.		Provisions of boundary/retaining wall of sufficient height are already made.
30.	The solid wastes to be generated during manufacturing process must be disposed in accordance with Solid Waste Management Rules, 2016.	Agreed	No comment
31.	Proper housekeeping should be maintained at the premises.	Agreed	As stated earlier
32.	There should be regular housekeeping with providing the facilities like hand gloves, masks etc. to the employees working in the unit.	Agreed	Provision is already there.
33.	The plant should be established and operated in compliance with Solid Waste Management Rules, 2016 and carry out all the responsibilities as entrusted in the said Rules.	Agreed	Since this is MSW treatment plant, all rules in this regard will be followed.
34.	The unit should take all necessary measures to prevent leachate generated in the processes from entering into natural water bodies including ground water.	Agreed	Leachate generated will be treated as per PCBA standard before disposing.
35.	Adequate Rain Water Management System should be established so that Rain Water does not come in contact with the waste stored at the site thereby checking contamination of storm water runoff.	Agreed	MSW will be kept in shade to avoid contact with rain water and contamination.
36.	The unit should follow the guidelines of Hazardous & Other Waste (Management & Transboundary Movement) Rules, 2016.	Agreed	No comment
37.	The unit should follow the guidelines as per Appendix-A	Agreed	No comment
38.	The Board will have the liberty to withdraw the "Consent to Establish" if adequate pollution control and safety measures are not taken,	Agreed	No comment

Appendix 3: Environmental Clearance 100 MT compost plant with 60 MT sanitary landfill site and compliance



GOVT. OF ASSAM
OFFICE OF THE STATE ENVIRONMENT IMPACT ASSESSMENT AUTHORITY, ASSAM
BAMUNIMAIDAM, GUWAHATI-21

7PM/2015

 Dated: Guwahati the 21st September 2015

No. SEIAA.27/2015/EC/56/265

To,

The Project Director,
 Assam Urban Infrastructure Investment Program (AUIIP)
 Guwahati Development Department
 3rd Floor, Tripti Tower, Ganeshguri, Guwahati-05


 Received
 No. 2626
 Date: 22/9/15

Subj: - Proposal for establishment of 100 TPD Municipal Solid Waste Processing Facility (MSWPF) for Dibrugarh city at Village- Ghoramara, Dibrugarh West Revenue Circle, Dibrugarh, Assam; Regarding-Environmental Clearance.

Sir,

This has a reference to your application No. ADB/AUIIP/SW/9/2014/34 dated 03/07/2013 and subsequent communications for Environmental Clearance for the establishment of 100 TPD MSWPF for Dibrugarh city at Vill- Ghoramara, Dibrugarh West Revenue Circle, Dibrugarh, Assam.

The proposal has been examined and processed in accordance with EIA notification, 2006 and its amendment thereof.

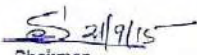
The inter-alia of the project is to development and establishment of 100 TPD Processing Plant and 60 MT Sanitary Landfill site and allied works. The proposed project site has an area of 28.81 ha. Project site will comprise of compost Plant, an engineered Sanitary landfill, leachate treatment plant, raw waste shorting yard and ancillary facilities. The proposed land area use for landfill and other components has been 7.86 ha in 1st phase and 2.7 ha of land fill area have been proposed for 2nd phase. Adequate area and volume available at SWM site at present to receive & fill up Solid waste materials for a period of 30 yrs with expected height of about 10 mts. for 1st phase activity and 16 mts. for phase-2 activity. As the Sessa stream is passing nearby the proposed landfill site, proper retaining walls are being constructed for protecting waste arises from compost plant, other infrastructure facilities & landfill site. Adequate land within the SWM site shall be made available for leachate collection & treatment facilities. The occupier of the MSWPF, Dibrugarh agreed upon to follow and implementation of rules prescribed in the MSW (Management & Handling) Rules 2000 and guidelines prescribed in the Technical Guidance of Manual on Common Municipal Solid Waste Management facilities published by MoEF, Govt. of India. Presently per capita generation of MSW in Dibrugarh metropolitan Area (DMPA) has been considered as 0.350 kg/ day (2011 & 2013) and projected generation will be 2016- 0.362 kg/ day, 2026-0.412 kg/ day, 2036-0.462 kg/ day 2046- 0.512 kg/ day. House to house collection of MSW has been proposed alongwith segregation of wastes at source. Water requirement will be 7 KLD during construction and 2 KLD will be during operation surface water from Sessa stream will be used. The proposed MSW composting unit has been comprised with four stages in scientific treatment & processing of bio- solid waste through controlled accelerated bio conversion technology. The proposed area for green belt development has been 1.85 ha. Post closure plan has also been proposed following MSW (Management & handling) Rules 2000, Power requirement is 1.5 MW for the proposed MSW processing facility. DG sets will be provided for backup electricity supply during power failure and necessary control measure will be followed as per rule. Landfill gas collection system will be provided for collection of gases & will then be collected in a tank and will be flared. Total cost of the project is 48.49 Crores.

The proposal has been examined & processed in accordance with EIA notification 2006 and its amendments thereof. The members of the SEIAA & SEAC, Assam has been examined & scrutinized the documents of the proposal and found that the project falls under schedule 7 (1) and considered as B1 category of EIA notification 2006. Accordingly TOR has been recommended for preparation of EIA & EMP Report.

Public hearing and public consultation was held on 17/12/2014 & 22/07/2015 respectively.

Subsequently final EIA/ EMP Report have been submitted alongwith minutes of Public Hearing/ public consultation to SEIAA, Assam. The project proponent has appraised the project proposal in the meeting of SEIAA & SEAC, Assam held on 29/08/2015. The Members of the Committees recommended the proposal for issuance of Environmental Clearance incorporating some of the pertinent points related to the project.

Based on the recommendation of the Committees, the SEIAA, Assam accords Environmental Clearance to the project as mentioned above under the provision of EIA notification 2006 and its


 Chairman
 SEIAA, Assam

1

Compliance with EC conditions for setting up 100 MT compost plant with 60 MT sanitary landfill site

Compliance Requirement – EC Condition	Specific actions and design considerations	Remarks – Action plan
A. Specific Condition		
I. Construction & Design Stage		
1. House to house collection/ community bin collection/ collection of waste from slums and squatters/commercial/official complexes shall be organized by DMB.	In design house to house collection has been considered and already in few pockets DMB started the process	House to house collection to be cover for entire Dibrugarh within 3 months of operation of landfill
2. Bio-medical waste, horticulture waste, construction debris, hazardous waste, dairy waste shall be managed separately as per provision of existing rules and regulations.	Different type of wastes would be collected separately as per National Rules. Considered in the design	Already maintained.
3. As proposed, adequate link routes are to be developed for proper collection of Municipal Solid Waste(MSW) from various source locations and for smooth transportation of the same to the identified treatment/disposal facilities.	Collection and Transportation route for management of solid waste already planned and which will be rectified again after purchase of new vehicles and equipments under the said sub project	New vehicles will be purchase under the project and after increase in number of transport vehicle route to be developed/ revised for minimization of transportation time. All action will be completed within 6 months of commissioning of improved SWM system
4. Colour coded bins shall be provided at every house hold and source segregation shall be ensured.	Under the sub project 50000 numbers 25-litre household dustbins is to be provided for the residents for segregation of waste at source (biodegradable and non-biodegradable)	After implementation of project within 3 months colour coded bins will be distributed
5. The waste receptacles and the garbage lifting machineries should conform to each other.	Considered under procurement and utilization process	
6. Manpower should be planned in such a manner that collection and transport of waste is achieved upto desired level.	Additional manpower will be engaged in DMB for running improved SWM system	
7. Waste from slaughter houses, meat & fish markets, fruits and vegetable markets which are biodegradable in nature shall be managed to make use of such waste scientifically.	Waste from slaughter houses, meat & fish markets, fruits and vegetable markets which are biodegradable will be collected separately under improved system and utilize in compost plant. This is considered in the design	
8. Waste (garbage, dry leaves) shall not be burnt.	Dry leaves will be collected after road sweeping. Burning of dry leaves would be avoided	
9. Stray animals shall not be allowed to move around waste storage facilities and shall be managed in accordance with the State laws.	Waste storage will be planned under improved SWM system with use of cover so that Stray animals unable to move around waste bin	
10. The municipal authority shall notify waste collection schedule and likely method to be adopted for public benefit	The municipal authority will notify improved waste collection schedule for public	After commissioning of improved system

Compliance Requirement – EC Condition	Specific actions and design considerations	Remarks – Action plan
in the town.		
11. The MSW shall be sent to the treatment facility after collection. Secondary collection point (SCPs) shall be constructed. Adequate storage facilities and hygienic conditions are to be provided in the SCPs.	As per design the MSW would be sent to the treatment facility after collection from secondary point or from direct household level. Hygienic condition will be maintained at all secondary collection point	
12. The Municipal authority shall undertake phased program to ensure community participation in waste segregation	Involvement of community in waste segregation is already planned	
II. Storage of MSW		
1. Municipal authority shall establish and maintain storage facilities in a such a manner as they do not create unhygienic and in-sanitary condition around it.	Municipal authority would establish and maintain storage facilities in hygienic manner	
2. Storage facilities to be set up by municipal authority or any other agency shall be so designed that wastes stored are not exposed to open atmosphere and shall be aesthetically acceptable and user-friendly.	Covered storage facility/ bins have been procured and used presently. Waste will be not stored in open atmosphere and bins will be placed at common place so aesthetically accept by local people	
3. Storage facilities or bins shall have easy to operate for handling, transfer & transfer & transportation of waste. Bins for storage of biodegradable waste shall be green, storage of recyclable shall be white and for storage of other waste shall be black.	Storage of different category of waste to be done as per colour coded bins which to be provided under improved solid waste management system	Will be provided during and just after commissioning of improved system
4. Manual handling of waste shall be prohibited.	Manual handling / double handling of waste will be no longer be continued. As per design source segregation in colour coded bin has been planned	
III. Waste Treatment Facility		
1. Segregated organic waste shall be sent to the compost plant in covered manner as proposed.	As per compost plant design segregated waste will be sent to compost plant	
2. Windrow composting shall be conducted for stabilizing the organic portion of the waste.	Windrow composting would be set up under waste processing unit	
3. The composting plants at treatment facilities shall have waste receiving platform. Windrow platform, monsoon shed, Preparatory section, curing area, refinement section, quality check Area, godown. Each section should be constructed with the general requirement proposed in the report.	As per compost plant design all sections (waste receiving platform. Windrow platform, monsoon shed, Preparatory section, curing area, refinement section, quality check Area, godown) would be provided in compost plant	
4. Receiving platform of concrete slab covered with shed will be provided for further segregation and maintaining waste before sending to windrow area. Gutters to collect leachate will be provided on the platform and leachate will be drained into and stored in the leachate pit(s). Leachate will be finally brought for treatment and discharge.	Waste will be further segregated before sending to windrow. Leachate will be collected in pit and after treatment it will be discharge. Leachate collection pit considered in the design.	

Compliance Requirement – EC Condition	Specific actions and design considerations	Remarks – Action plan
5. Fence and Buffer zone will be provided surrounding the transfer section/compost plant. Water taps will be provided for daily cleaning and treatment shall be done for the cleaning waste water properly to comply the standard as prescribed by CPCB/MoEFCC.	As per design provision adequate buffer zone would be provided around compost plant and landfill facility. Washing platform will also be provided at treatment and disposal facility sites and waste water will be treated before discharge and conforming standard of CPCB	
6. Adequate roof shed and concrete platform/roof should be provided to all sections.	Adequate roof shed and concrete platform/roof would be provided at compost plant's different section	
7. Access to loaders should be ensured.	Being ensured	
8. Ambient air quality monitoring will be carried out during operation period and report shall be made available to public.	Ambient air quality monitoring will be conducted during operation phase as per EMP and condition of clearance and report will be disclosed in website and to public	Monitoring will be carried out as per accepted EMP and monitoring plan after starting of defect liability and then operation phase
IV. Pre - processing Area		
1. The size and design of the pre-processing area should be adequate for proper storage of incoming MSW.	Pre- processing area is designed to store entire MSW	
2. Pre-processing area should consist of permanent roof shed over platform, partition wall for protection against wind and noise, concrete platform, Weighbridge facility, Waste loading, Waste segregation(if required) and Waste shredding facilities etc. Access to loaders should be ensured.	Pre-processing area would be consist of permanent roof shed over platform, partition wall for protection against wind and noise, concrete platform, weighbridge facility, Waste loading, Waste segregation and Waste shredding facilities etc.	
3. Recyclables will be segregated into 5 categories (papers, plastics, rubbers, metals and glasses) and placed in the respective containers and routed through appropriate vendors. Non-recyclables will be sent to landfill site.	Recyclable materials will be segregated at household levels and at pre processing level as per the categories mentioned. Recycled materials will be sold to respective registered vendors. Non recyclable materials will be dispose to landfill site	
4. Battery wastes, E-wastes & Hazardous wastes shall be handled and disposed as per respective rules framed under E.P. Act 1986.	Battery wastes, E-wastes & Hazardous wastes will be not mixed with MSW. Those will be collected separately and dispose to hazardous waste disposal site as per Environment Protection (E. P) 1986 and Hazardous waste handling rules	
V. Processing Area		
1. The processing area comprises of mass composting and curing activity.	In processing area there will be mass composting and curing activity. Those are part of design of processing unit before composting	
2. Adequate residence time should be provided for compostable waste in mass windrow.	Under processing unit sufficient time will be provided for maturing in mass windrow	
3. Proper space is required for easy movement for loader or operation of vehicle.	Sufficient space will be provided at processing unit for easy movement for loader or operation of vehicle.	
4. The mass composting pad surface and	The mass composting pad surface	

Compliance Requirement – EC Condition	Specific actions and design considerations	Remarks – Action plan
curing area is paved to avoid erosion from runoff. Grading the surface of the pad to meet the optimal slope will also help to prevent erosion by allowing smooth drainage.	and curing area will be paved to avoid erosion from runoff. Grading the surface will be done to prevent erosion and smooth draining	
5. This facility will be equipped with hopper, feeding conveyor, dual trammel, reject conveyor and transfer conveyor. The under sizes digested material including manure will be conveyed by transfer conveyor to curing area and rejects shall be conveyed by trolley to transfer station.	Processing facility will be equipped with hopper, feeding conveyor, dual trammel, reject conveyor and transfer conveyor. Manure will be conveyed to transfer station	
6. Digested material will be stacked in the curing area to remove moisture from digested material for effective screening and to protect the digested material from rain. Moisture shall be measured.	Composting materials after segregation will be placed for curing to remove moisture	
7. Adequate drainage at composting facilities should be provided in order to prevent water logging.	Adequate drainage at composting facilities would be provided (as per design) around the active areas in order to prevent water logging.	
VI. Post Processing Area		
1. The post processing area at composting facilities shall be used for screening, size reduction and bleeding operations for compost, conducting tests to ensure quality of compost, preparing compost for market and also for storing compost.	The post processing area at composting facilities would be used for screening, size reduction and bleeding operations for compost. Quality test for compost will be conducted to ensure quality of compost, preparing compost for market.	
2. Proper vibro-screen, density separator shall be installed to segregate metals, pebbles, sand and all undigested materials.	Proper vibro-screen, density separator will be installed for all kind of segregation	
3. Adequate storage capacities should be incorporated into site design for composting facilities. Backup storage and disposal capacity should also be ready to accommodate demand of seasonal markets.	Adequate storage capacities should be incorporated into site design for composting facilities. Backup storage and disposal capacity should also be ready to accommodate demand of seasonal markets.	
4. Buffer zone should be provided to minimize the odour and transport of bio aerosols along download of the facility.	Buffer zone will be provided around treatment and disposal facility to minimize the odour	Buffer zone will be developed at later phase of construction
5. Sprinklers/water spraying facility should be installed in order to reduce the dust generation at site during the construction work.	Water sprinkling facility would be installed at all working areas in order to reduce the dust generation at site during the construction work and operation	
6. On site road leading to the tipping and storage areas should be paved or graveled roads to accommodate movement of large vehicles even during adverse weather conditions. Roads shall be designed to provide adequate space for turning. The roads at dumping areas should be designed to accommodate delivery by all sorts of	Internal road will be developed after consideration of movement of large vehicles, delivery of all materials	

Compliance Requirement – EC Condition	Specific actions and design considerations	Remarks – Action plan
vehicles.		
7. Inert materials and rejects of compost shall be transported to landfill site.	As per landfill site design Inert materials and rejects of compost will be transported to landfill site. Capacity of landfill site considered accordingly	
8. Ventilation arrangement should be ensured in case of close siding.	Would be done as per design provision	
VII. Landfill Sanitary Facility		
1. Semi-Aerobic landfill system shall be constructed as proposed.	For disposal of MSW Semi-Aerobic landfill system will be developed	
2. The sanitary landfill shall include following features: Section Embankment, Disposal ground, Leachate Collection and Removal System, Municipal Solid Waste Inspection area, Storm Water drainage system, Green belt/buffer area/lawns, Boundary wall, Weigh Bridge, Leachate Treatment plant, Gas collection system if required, water supply system, Quality control laboratory, Boundary wall and Fencing, Roads and street lighting, Office block, Shed for machinery storage and parking, vehicle washing platform and other basic amenities.	As per design and MSW rules the sanitary landfill facility will include following features: Section Embankment, Disposal ground, Leachate Collection and Removal System, Municipal Solid Waste Inspection area, Storm Water drainage system, Green belt/buffer area/lawns, Boundary wall, Weigh Bridge, Leachate Treatment plant, Gas collection system if required, water supply system, Quality control laboratory, Boundary wall and Fencing, Roads and street lighting, Office block, Shed for machinery storage and parking, vehicle washing platform and other basic amenities.	
3. Landfill layout should be designed to cater landfill as per MSW (M&H) Rules 2000 and guidelines prescribed by CPCB/MoEFCC for 30 years as mentioned in the EIA report.	Landfill layout designed to cater landfill as per MSW (M&H) Rules 2000 and guidelines prescribed by CPCB/MoEFCC for 30 years	
4. The landfill should be designed in line with MSW Rules, 2000 having minimum environmental impact.	The landfill is designed in line with MSW Rules, 2000 having minimum environmental impact (Ref EIA report including EMP)	
5. The landfill should be developed in two phases.	Landfill will be developed in phases as mentioned in DPR and EIA report	
6. The landfill should be of the capacity to handle 60 MT waste in 1 st phased as proposed.	Landfill is planned accordingly	
7. Adequate bottom liner system and top linear system shall be provided. Appropriate thickness of the HDPE liner for the bottom liner as well as top liner system shall be provided to prevent and damaging impact in surrounding area and to prevent water infiltration.	1.5 mm thick HDPE geo-membranes liner will be provided on the top of the 900 mm thick clay liner to prevent and damaging impact in surrounding area and to prevent water infiltration.	
8. The coefficient of permeability as proposed should be used as guiding factor.	Proposed coefficient of permeability will be used for infiltration and leachate generation	
9. Leachate produced from infiltration of water percolated through the dumped waste layers will be collected in a pond(aeration pond) through properly sized perforated pipes (main leachate	Leachate collection lateral pipes would be provided above the membranes in 300 mm thick silt sand. The 150 mm collection pipes shall be provided at a spacing of 20 m c/c.	

Compliance Requirement – EC Condition	Specific actions and design considerations	Remarks – Action plan
pipes and branch leachate pipes) embedded in graded gravels/boulders as filter material.	The pipes shall be perforated at the bottom and shall be laid at a slope of 1 in 100 and will be connected to the Header pipes These Header pipes will be ultimately connected to the inlet of the leachate treatment tank.	
10. The drainage should be designed with special care to avoid any overflow.	The drainage has been designed with special care to avoid any overflow.	
11. Leachate collection, treatment and removal system should be developed for effective collection of leachate and reducing the risk of contamination of ground water.	Leachate collection, treatment and removal system would be developed for effective collection of leachate without contamination of ground water	
12. Daily cell cover is to be provided as per norms.	Will be provided as per MSW Rules	
13. As per the Municipal Solid Waste (Management and Handling) Rules 2000, DMB should declare a no-development buffer zone around the landfill site and the same should be incorporated in the town planning department land use plans.	DMB will declare a no-development buffer zone around the landfill site and the same would be incorporated in the town planning department land use plans.	Within 3 months. Before starting of the construction work DMB will take necessary action
VIII. Facilities at site		
1. A buffer zone of no-development shall be maintained around landfill site and shall be incorporated in the Town Planning Department's land-use plans.	A buffer zone of no-development will be maintained around landfill site and will be incorporated in the Town Planning Department's land-use plans.	The action will be taken accordingly.
2. Landfill site shall be fenced or hedged and provided with proper gate to monitor incoming vehicles or other modes of transportation.	As per design landfill site will be fenced and monitoring of incoming vehicles or other modes of transportation will be done from gate	
3. Landfill site shall be well protected to prevent entry of unauthorized persons and stray animals.	Landfill site will be well protected to prevent entry of unauthorized persons and stray animals.	
4. Approach and other internal roads for free movement of vehicles and other machinery shall exist at the landfill site.	At landfill approach and other internal roads will be constructed	
5. The landfill site shall have wastes inspection facility to monitor wastes brought in for landfill, office facility for record keeping and shelter for keeping equipment and machinery including pollution monitoring equipments.	The landfill site will have wastes inspection facility to monitor wastes brought in for landfill, office facility for record keeping and shelter for keeping equipment and machinery including pollution monitoring equipments.	
6. Provisions like Weigh bridge to measure quantity of waste brought at landfill site, fire protection equipments and other facilities as may be required shall be provided.	Weigh bridge will be provided to measure quantity of waste brought at landfill site, fire protection equipments and other facilities as may be required will be provided.	
7. Utilities such as drinking water (preferably bathing facilities for workers) and lighting arrangements for easy landfill operations when carried out in night hours shall be provided.	Utilities such as drinking water (preferably bathing facilities for workers) and lighting arrangements for easy landfill operations when carried out in night hours will be provided as per design	
8. Safety provisions including health	Safety provisions including health	

Compliance Requirement – EC Condition	Specific actions and design considerations	Remarks – Action plan
inspections of workers at landfill site shall be periodically made.	inspections of workers at landfill site will be periodically made as per H & S plan.	
IX. Leachate Collection, Treatment & Removal System		
1. Suitable bottom liner system shall be provided with adequate slope towards the leachate collection pipes.	Suitable bottom liner system will be provided with adequate slope towards the leachate collection pipes. Considered in design	
2. As proposed, HDPE pipes with adequate strength, diameter should be laid at suitable slope and spacing and leachate collection.	As proposed, HDPE pipes with adequate strength, diameter should be laid at suitable slope and spacing and leachate collection.	
3. Perforated drainage pipes shall be provided for rapid transport of fluids. Adequate slope and spacing should be provided.	Perforated drainage pipes will be provided for rapid transport of fluids. Adequate slope and spacing shall be provided.	
4. These pipes should be of good quality HDPE with appropriate pressure-specification and perforations.	The pipes would be of good quality HDPE with appropriate pressure-specification and perforations.	
5. RCC collection sump shall be constructed.	RCC collection sump will be constructed.	
6. Leachate shall be treated in the leachate treatment plant and disposed or re-used in landscaping after compliance of the standards prescribed by CPCB/MoEFCC.	Leachate will be treated in the leachate treatment plant and disposed or re-used in landscaping after compliance of the standards prescribed by CPCB/MoEFCC.	
7. The component that is most vulnerable to compressive strength failure is the drainage layer piping. Leachate collection system piping can fail by excessive deflection which may lead to bucking or collapse. All components of the leachate collection system must have sufficient strength to support the weight of the overlying waste, cover system and post closure loadings as well as stresses from operating equipment.	All components of the leachate collection system would have sufficient strength to support the weight of the overlying waste, cover system and post closure loadings as well as stresses from operating equipment.	
8. The depth of the drainage layer around the pipe should be deeper than the diameter of then pipe. The pipe should be placed in trenches to provide the extra depth. In addition, the trench serves as a sump for leachate collection.	The depth of the drainage layer around the pipe would be deeper than the diameter of the pipe. The pipe will be placed in trenches to provide the extra depth. In addition, the trench serves as a sump for leachate collection.	
9. As pipe can be susceptible to particulate and biological clogging similar to drainage layer material regular maintenance should be ensured.	As pipe can be susceptible to particulate and biological clogging similar to drainage layer material regular maintenance would be ensured. Further the perforated pipes will be covered by geo-textile material in order to stop the clogging.	
X. Storm water collection and drainage system		
1. Storm water drainage system should be designed to minimize the leachate	Storm water drainage system is designed to minimize the leachate	

Compliance Requirement – EC Condition	Specific actions and design considerations	Remarks – Action plan
generation and to prevent contamination of surface water through runoff from dumpsite. The storm water should not be allowed to enter the active cell of the landfill. Stagnation must be avoided. Storm water from the site will be collected in a detention pond prior disposal.	generation and to prevent contamination of surface water through runoff from dumpsite. Further due care will be taken so that storm water will not enter into the active cell.	
2. The project site should be suitable levelled and embankments should be constructed in such a manner that under no circumstances the storm water from outside area can enter the project site or the project site runoff inundates surrounding roads or adjoining area located nearby.	The project site would be suitable leveled and embankments would be constructed in such a manner that under no circumstances the storm water from outside area can enter the project site or the project site runoff inundates surrounding roads or adjoining area located nearby.	
XI. Transport and other conditions		
1. Adequate Buffer zone should be provided to minimize the transport of odour and bio aerosols downwind of the facility.	Adequate Buffer zone would be provided as per design to minimize the transport of odour and bio aerosols downwind of the facility. Buffer zone development is already considered in design	
2. Adequate transport management plan should be in place for uninterrupted traffic flow. Roads shall be designed to provide adequate turning and dumping areas to accommodate delivery by all types of vehicles.	Adequate transport management plan would be in place for uninterrupted traffic flow. Roads will be designed to provide adequate turning and dumping areas to accommodate delivery by all types of vehicles.	
3. On site roads should be paved or graveled roads leading to the tipping area and storage areas to accommodate movement of large vehicles during adverse weather conditions.	On site roads would be paved or graveled roads leading to the tipping area and storage areas to accommodate movement of large vehicles during adverse weather conditions.	
4. Adequate lighting should be provided in streets and working areas for ensuring operation and security	As per design adequate lighting would be provided in streets and working areas for ensuring operation and security	
A. Specific Conditions-For Operation Stage:		
I. Collection and Transport system		
1. All the vehicles shall be used for transportation of MSW from Processing facility to Landfill site must have suitable tracking system.	All the vehicles will be used for transportation of MSW from Processing facility to Landfill site would have suitable tracking system.	
2. All vehicles shall be fitted with fire extinguishers and first aid kit.	All vehicles will be fitted with fire extinguishers and first aid kit.	
3. Medical checkups of drivers and other field staff should be carried out from time to time.	Medical checkups of drivers and other field staff would be carried out from time to time.	
4. During transportation the container shall remain closed from all side and shall be opened at the time of disposal of the waste only. Each container should be inspected atleast once in a week for any leakage spillage problem.	During transportation the container will be remain closed from all side and will be opened at the time of disposal of the waste only. Each container should be inspected atleast once in a week for any leakage spillage	

Compliance Requirement – EC Condition	Specific actions and design considerations	Remarks – Action plan
	problem.	
5. The transporter shall be made about the time of wastes and quantities	The transporter will be made about the time of wastes and quantities	The action will be taken accordingly during implementation stage.
II. Segregation and reuse of Recycling Materials		
1. Recyclables will be segregated at compost plant as well as at transfer station..	Recyclables will be segregated at compost plant as well as at transfer station.	
2. Wastes other than biodegradable and recyclables after segregation will go to landfill as per specifications of Schedule III of MSW (M&H) Rules 2000.	Wastes other than biodegradable and recyclables after segregation would go to landfill as per specifications of Schedule III of MSW (M&H) Rules 2000.	
3. As proposed manual segregation of recyclable material (paper, glass, plastics, rubber and metal) will take place at the transfer station platform. Recyclable material will be segregated by adequate number of workers equipped with all safety tools and equipment.	As proposed in design manual segregation of recyclable material (paper, glass, plastics, rubber and metal) will take place at the transfer station platform. Recyclable material will be segregated by adequate number of workers equipped with all safety tools and equipment.	
III. Operation at composting plants		
1. Daily log of MSW handled in the facilities should be recorded and kept in place.	Daily log of MSW handled in the facilities would be recorded at compost plant and kept in place.	
2. Weighbridge should be used for quantification of waste. Weighbridges should be calibrated by independent agency on regular basis.	Weighbridge would be used for quantification of waste. Weighbridges will be calibrated at definite interval by independent agency	
3. The number of vehicles, number of trips by each vehicle, quantity of waste transported by should be recorded at all facilities.	The number of vehicles, number of trips by each vehicle, quantity of waste transported by would be recorded at all facilities.	
4. The organic solid waste shall be stabilized through microbial action.	The organic solid waste will be stabilized through microbial action.	
5. As proposed windrow shall be turned twice a week for oxygenation. Active composting shall be followed by curing at bunker for adequate time period as and when required.	Windrow will be turned twice a week for oxygenation. Active composting will be followed by curing at bunker for adequate time period as and when required.	
6. In the mass windrow, adequate moisture content is to be maintained throughout the fermented cycle.	In the mass windrow, adequate moisture content is to be maintained throughout the fermented cycle.	
7. Waste should be stacked in adequately spaced rows.	Waste would be stacked in adequately spaced rows.	
8. Ground compaction and leaving shall be provided in the area occupied by the composting bunkers, curing pads and roads.	Ground compaction and leaving will be provided in the area occupied by the composting bunkers, curing pads and roads.	
9. Water shall be supplied to the piles to maintain the desired moisture content. Any leachate or runoff from the piles will be collected and treated or added back to a batch of incoming MSW to increase its moisture content.	Water will be supplied to the piles to maintain the desired moisture content. Any leachate or runoff from the piles will be collected and treated or added back to a batch of incoming MSW to increase its moisture content.	

Compliance Requirement – EC Condition	Specific actions and design considerations	Remarks – Action plan
10. Quality control shall be ensured for physical, chemical and biological parameters. On site laboratory facility should be provided with skilled manpower.	Quality control will be ensured for physical, chemical and biological parameters. On site laboratory facility should be provided with skilled manpower.	
11. Finished product shall be packed in HDPE bags or polybags.	Finished product will be packed in HDPE bags or polybags for sale.	
12. In order to ensure safe application of compost the specification for compost quality shall be met as prescribed MSW(M & H) Rules 2000.	In order to ensure safe application of compost the specification for compost quality will be met as prescribed MSW(M & H) Rules 2000.	
13. Necessary precautions shall be taken to minimize nuisance of order, flies, rodents, bird menace and fire hazards.	Necessary precautions will be taken to minimize nuisance of order, flies, rodents, and bird menace and fire hazards.	
14. Ambient air quality monitoring shall be regularly carried out particularly for checking odour, nuisance at down-wind direction on the boundary of processing plant.	Ambient air quality monitoring will be regularly carried out particularly for checking odour, nuisance at down-wind direction on the boundary of processing plant.	Monitoring will be carried out at definite interval and as per EMP
15. Routine operation and maintenance scheme should be complemented by Emergency Response Protocol (ERP) to carry out emergency repairs and damage controls.	Routine operation and maintenance scheme would be complemented by Emergency Response Protocol (ERP) to carry out emergency repairs and damage controls.	
16. The compost and leachate should comply with quality standards proposed in MSW rules	The compost and leachate would comply with quality standards proposed in MSW rules	
17. Buffer zone should be provided to minimize the odour and transport of bio aerosols along downwind of the facility.	Buffer zone would be provided as per design to minimize the odour and transport of bio aerosols along downwind of the facility.	
IV. Operation at Landfill		
1. The landfill facility operator must ensure that only the residual inert material and rejects of compost plant, sewer silt is disposed.	At proposed landfill facility it is ensured that only the residual inert material and rejects of compost plant, sewer silt will be disposed	
2. Disposal of construction debris at landfill is not preferably being allowed.	Disposal of construction debris at landfill will be not done	
3. The waste transported at landfill facility shall be reported with date, time, waste quality etc.	The waste transported at landfill facility will be reported with date, time, waste quality etc. and these will be recorded	
4. The landfill shall be compacted during active operations on daily basis and covered as per requirement.	The landfill will be compacted during active operations on daily basis and covered as per requirement.	
5. Suitable design slope shall be maintained in the sanitary landfill.	Suitable design slope will be maintained in the sanitary landfill.	
6. The actual stability shall be tested at regular interval.	The actual stability will be tested at regular interval.	
7. An intermediate liner should be provided before onset of monsoon.	An intermediate liner would be provided before onset of monsoon.	
8. The final cover shall be laid as per construction requirements and MSW regulations to enhance surface drainage, minimize infiltration, vegetation and control the release of the	The final cover will be laid as per construction requirements and MSW regulations to enhance surface drainage, minimize infiltration, vegetation and control the release of the	

Compliance Requirement – EC Condition	Specific actions and design considerations	Remarks – Action plan
landfill gases. To ensure the rapid removal; of rainfall from the completed landfill and to avoid the formation of puddles, the final cover should have a requisite slope	the landfill gases.	
9. Sufficient distance is to maintain to avoid circular collapses. The geotechnical investigations on reports should be consulted for ensuring adequate safety factor.	Sufficient distance is to be maintained to avoid circular collapses. The geotechnical investigations on reports would be consulted for ensuring adequate safety factor.	
10. In constructing the road accessing from the Dibrugarh and adjoining area to the landfill site the current flow of rainwater in the rainy season could be prevented. So that the drain pipe needs to be big enough for the flow of rainwater from the upper reaches of the access road to the lower reaches of the access road.	In constructing the road accessing from the Dibrugarh and adjoining area to the landfill site the current flow of rainwater in the rainy season would be prevented. So that the drain pipe needs to be big enough for the flow of rainwater from the upper reaches of the access road to the lower reaches of the access road.	
11. Ambient noise level should not exceed the permissible limit. The overall noise levels in and around the plant area shall be kept well within the standards by providing noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generations. The ambient noise levels should conform to the standards prescribed under EPA rules, 1989 viz. 75 db(A) Leq (daytime) and 70 db(A) Leq (night time) and its subsequent amendments.	Ambient noise level would not exceed the permissible limit. The overall noise levels in and around the plant area will be kept well within the standards by providing noise control measures as per EMP	
12. Green belt shall be developed atleast 33% of the land area for proposed project to be covered by plantation.	Green belt will be developed at least 33% of the land area for proposed project to be covered by plantation.	Plantation will be done as per design and to be completed before operation
13. All internal roads should be concreted/ pitched. Proper lighting and proper pathway inside the premises should be constructed to ensure safe vehicular movement. Provision of separate pathways for entry and exit of vehicles should be considered. Vehicles should conform to pollution under control (PUC) norms. Proper housekeeping shall be maintained within the premises. Solar lighting should be used as far as practicable.	All internal roads would be concreted/ pitched. Proper lighting and proper pathway inside the premises would be constructed to ensure safe vehicular movement. Vehicles would conform to pollution under control (PUC) norms. Proper housekeeping will be maintained within the premises.	
14. Health and safety of workers shall be ensured. Workers shall be provided with adequate personal protective equipment (PPE) as per proposal and sanitation facilities. Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the factories act.	Health and safety of workers will be ensured. Workers shall be provided with adequate personal protective equipment (PPE) as per proposal and sanitation facilities. Occupational health surveillance of the workers will be done on a regular basis and records maintained as per the factories act.	
15. The implementation and monitoring of	The implementation and monitoring of	


Compliance Requirement – EC Condition	Specific actions and design considerations	Remarks – Action plan
Environmental Management Plan should be carried out as proposed.	Environmental Management Plan would be carried out as proposed.	
16. Corporate social responsibility programs should be carried out and shall be adopted as mentioned in EIA report.	Corporate social responsibility programs would be carried out and shall be adopted as mentioned in EIA report.	
V. Monitoring and Landfill facilities		
1. Monitoring of the ambient air quality, surface water quality shall be conducted as specified in MSW rules.	Monitoring of the ambient air quality, surface water quality will be conducted as specified in MSW rules	Monitoring will be done at definite interval
2. Monitoring wells should be set up to monitor leakage leachate into ground water. Atleast 4 monitoring wells should be set up at each site to monitor ground water flow in all possible directions. The monitoring wells can be located in consultation with district administration/PHED.	Monitoring wells will be set up to monitor leakage leachate into ground water. Atleast 4 monitoring wells would be set up at each site to monitor ground water flow in all possible directions. The monitoring wells will be located in consultation with district administration/PHED.	
3. The surface water, ground water, air quality, landfill gas, leachate, incoming waste etc. should be monitored as per the proposed environmental monitoring plant.	The surface water, ground water, air quality, landfill gas, leachate, incoming waste etc. would be monitored as per the proposed environmental monitoring plan	
4. The monitoring network is to be expanded/modified as and when situation required.	The monitoring network is to be expanded/modified as and when situation required.	
VI. Plantation at landfill site: A vegetative cover shall be provided over the completed site in accordance with the following specifications		
1. Selection of locality adopted non-edible perennial plants that are resistant to drought and extreme temperatures shall be allowed to grow.	Locality adopted non-edible perennial plants that are resistant to drought and extreme temperatures will be selected for plantation	
2. The plants grown be such that their roots do not penetrate more than 30 cms. This condition shall apply till the landfill is stabilized.	The plants grown will be such that their roots do not penetrate more than 30 cms. This condition shall apply till the landfill is stabilize	
3. Selected plants shall have ability to thrive on low-nutrient soil with minimum nutrient addition.	Selected plants will have ability to thrive on low-nutrient soil with minimum nutrient addition.	
4. Plantation to be made in sufficient density to minimize soil erosion.	Plantation will be done in sufficient density to minimize soil erosion.	
C. Closure of the Site & Post Closure cares: The post – closure care of landfill site should be conducted for at least fifteen years and long term monitoring or care plan shall consist of the following.		
1. Maintaining the integrity and effectiveness of final cover making repairs and preventing run-on and run off from eroding or otherwise damaging the final cover.	Will be maintained the integrity and effectiveness of final cover making repairs and preventing run-on and run off from eroding or otherwise damaging the final cover.	
2. Monitoring leachate collection system to ensure no overflow of leachate.	Leachate collection system will be monitored to ensure no overflow of leachate.	

Compliance Requirement – EC Condition	Specific actions and design considerations	Remarks – Action plan
3. Monitoring the influent and effluent quality at the sludge and leachate treatment plant.	The influent and effluent quality of the sludge and leachate treatment plant will be monitored	
4. Maintaining and operating the landfill gas collection system to meet the standards.	To meet the standards the landfill gas collection system will be monitored during operation	
5. Adequate venting system should be provided for venting gas. The gas collected in the vent layer shall be collected and vented through vent pipes.	At landfill adequate venting system would be provided for venting gas	
VII. Additional Conditions		
1. The L. P. School located near the proposed landfill site be shifted to a safe distance by the authority concern before construction of the proposed site.	Before construction of the proposed site L. P. School will be shifted	The action will be taken before construction.
2. The existing landscape shall be maintained to the extent of maximum possible way.	The existing landscape will be maintained to the extent of maximum possible way	
3. Dumping of MSW shall not be allowed in to the proposed landfill area before completion and commissioning of the project.	Dumping of MSW at new landfill will be started after commissioning of the project.	
4. The commitment made in the Meeting held on 22/07/2015 in the Conference Hall of Deputy Commissioner's office, Dibrugarh before the public of Lekai area in connection with establishment of Solid Waste Management Project at Lekai, Ghoramara, Dibrugarh shall be complied along with the compliance of the EIA report.	The commitment made in the Meeting held on 22/07/2015 in the Conference Hall of Deputy Commissioner's office, Dibrugarh before the public of Lekai area in connection with establishment of Solid Waste Management Project at Lekai, Ghoramara, Dibrugarh will be complied along with the compliance of the EIA report.	
D. General Condition:		
1. The project proponent shall comply with all the environmental protection measures and safeguards recommended. MSW Rules 2000 should be followed strictly. Further, the unit must undertake socio-economic development activities in the surrounding villages like community development programmes, educational programmes, drinking water supply and health care etc.	DMB and project Implementation agency will comply with all the environmental protection measures and safeguards recommended. MSW Rules 2000 would be followed strictly. Community development work will be conducted through community development cell of DMB	
2. All the conditions, liabilities and legal provisions contained in the Environmental Clearance shall be equally applicable to the successor management of the project in the event of the project proponent transferring the ownership, maintenance of management of the project to any other entity.	It is understood that all the conditions, liabilities and legal provisions contained in the Environmental Clearance will be equally applicable to the successor management of the project in the event of the project proponent transferring the ownership, maintenance of management of the project to any other entity through PPP model or direct transfer	
3. Provision should be made for the supply of kerosene or cooking gas to the	Kerosene or cooking gas to be provided to the labourers during	

Compliance Requirement – EC Condition	Specific actions and design considerations	Remarks – Action plan
labourers during construction phase. All the labourers to be engaged for construction works should be screened for health and adequately treated before issue of work permit.	construction phase. All the labourers to be engaged for construction works will be screened for health and adequately treated before issue of work permit.	
4. The vehicles and MSW handling/processing equipments shall be arranged as per EIA report and as per requirement from time to time.	The vehicles and MSW handling/processing equipments will be arranged as per EIA report and changes may be done as per requirement	
5. The project proponent should make financial provision in the total budget of the project for implementation of the environmental safeguards. The project authorities will provide requisite funds recurring and non-recurring to implement the conditions stipulated by the SEIAA along with the implementation schedule for all the conditions stipulated herein. The funds so provided should not be diverted for any other purpose.	As per EMP provision there is separate budget and provision of fund to be maintained for implementation of safeguard	
6. Not further expansion or modifications in plant should carried out without prior approval of the State Environmental Impact Assessment Authority, Assam.	Expansion or modifications in plant will be not carried out without prior approval of the State Environmental Impact Assessment Authority, Assam.	
7. In case of any violation of the conditions laid down in this Environmental Clearance, Section 16 of the Environment (Protection) Act, 1986 will be applicable.	This is agreed that in case of any violation of the conditions laid down in this Environmental Clearance, Section 16 of the Environment (Protection) Act, 1986 will be applicable.	
8. In the case of any change(s) in the scope of the project, the project would require a fresh appraisal by the SEIAA.	This is agreed in the case of any change(s) in the scope of the project, the project would require a fresh appraisal by the SEIAA.	
9. The State Environmental Impact Assessment Authority reserves the right to add additional condition(s).	This is understood that The State Environmental Impact Assessment Authority reserves the right to add additional condition(s).	
10. Safeguard measures subsequently if found necessary and to take action including revoking of the environmental clearance under the provisions of the Environment (Protection) Act, 1986 to ensure effective implementation of the suggested measures in a time-bound and satisfactory manner.	Safeguard measures subsequently if found necessary and to take action including revoking of the environmental clearance under the provisions of the Environment (Protection) Act, 1986 to ensure effective implementation of the suggested measures in a time-bound and satisfactory manner.	
11. The project proponent should inform the public that the project has been accorded environmental clearance by the SEIAA. This should be advertised within seven days from the date of issue of the clearance letter, at least in two local newspapers that are widely circulated in the region of which one shall be in the vernacular language of	The project proponent already informs the public that the project has been accorded environmental clearance by the SEIAA. Disclosure to two newspapers has been done	

Compliance Requirement – EC Condition	Specific actions and design considerations	Remarks – Action plan
the locality concerned.		
12. The project authorities should inform the State Pollution Control Board as well as the SEIAA, the date of financial closure and final approval of the project implementation.	The project authorities will inform the State Pollution Control Board as well as the SEIAA, the date of financial closure and final approval of the project implementation.	
13. Prior Consent to Establish (NOC) for the proposed project must be obtained from PCB, Assam before commencement of construction. All other statutory clearance should be obtained by the project proponent from the competent authorities.	Prior Consent to Establish (NOC) for the proposed project would be obtained from PCB, Assam before commencement of construction	
14. The environmental clearance accorded shall be valid for a period of 5 years for the proposed project.	Landfill construction already started and will be finished by 2019	
15. The above stipulation would be enforced along with those under the Water (Prevention and Control of Pollution) Act 1974, the Air (Prevention and Control of Pollution) Act 1981, the Environment (Prevention) Act 1986, the Hazardous Waste (Management, Handling and Trans boundary Movement) Rules, 2008, the Public Liability Insurance Act, 1991, the Environment Impact Assessment Notification 2006 and their amendments.	The above stipulation would be enforced along with all relevant Acts & Rules Water (Prevention and Control of Pollution) Act 1974, the Air (Prevention and Control of Pollution) Act 1981, the Environment (Prevention) Act 1986, the Hazardous Waste (Management, Handling and Trans boundary Movement) Rules, 2008, the Public Liability Insurance Act, 1991, the Environment Impact Assessment Notification 2006 and their amendments.	

Appendix 4: NOC (height clearance only) for construction of sanitary landfill project at Ghoramara

	<p style="text-align: center;">भारतीय विमानपत्तन प्राधिकरण Airports Authority of India, North-East Region, LGBI Airport, Guwahati-781015, Assam</p> <p style="text-align: center;"><i>SPEED POST</i></p>				
<p>Ref: AAI/NER/ATM-50/NOC / 3601-04</p>		<p>Date: 28.06.2013</p>			
<p><u>NOC FOR HEIGHT CLEARANCE ONLY</u></p>					
<p>Project Director, Project Management Unit (PMU), Assam Urban Infrastructure Investment Programme (AUIIP) 3rd floor, Tripti Tower, Ganeshguri Chariali, Guwahati-781005</p>					
<p>Sub: NOC (height clearance only) for construction of Sanitary Land Fill Project at Ghoramara, Dibrugarh</p>					
<p>Reference to your application dated 10.06.2013 on the above subject.</p>					
<p>1. There is no objection to the erection of structures as per the details given below, subject to the following conditions:-</p>					
Point No	Coordinates in WGS-84 (Lat 'N' Long 'E')	Site Elevation or reduced level AMSL (in mtr.)	Height of the Structure AGL (in mtr.)	Top elevation of Structure AMSL (in mtr.)	Site details
1	27° 24' 38.498 N 094° 55' 20.086 E	100.00	10.00	110.00	Plot no. 30,31,32,33,34,35,36,83,85, 93,94,95,96,97,98,99, 134,155,156, 102,92,91,90,84,79,76,44,41,37,42, 81,82,100,103 Vill -Ghoramara Mouza - Mancotta Khanikar Dist -Dibrugarh, Assam
2	27° 24' 38.708 N 094° 55' 18.664 E	100.00	10.00	110.00	
3	27° 24' 34.074 N 094° 55' 17.280 E	100.00	10.00	110.00	
4	27° 24' 33.557 N 094° 55' 18.765 E	100.00	28.76	128.76	
<p>2. This No Objection Certificate is being issued on the express understanding that the site elevation, relative location of the Proposed building/structure and its distance and bearing from the ARP/ Runway ends/Runway centre line (whichever is applicable) as tendered by the applicant are correct. If, however, at any stage it is established that the actual data is different from the tendered data and which could adversely affect aircraft operations, the structure or parts thereof in respect of which this NOC is being issued will have to be demolished at the applicant's own cost as may be directed by the Airports Authority of India.</p> <p>3. No light or a combination of lights which by reason of its intensity, configuration or colour may cause confusion with the aeronautical ground lights of the airport shall be installed at the site at any time during or after the construction of the building.</p> <p>4. This certificate is valid for a period of 5 (Five) year from the date of issue. If the building/ structure/ chimney is not constructed and completed within the above mentioned period of 5(Five) year, the applicant will be required to obtain a fresh No Objection Certificate from the General Manager (ATM), NER. The date of completion of building/ structure/ chimney should be intimated to the General Manager (ATM), North East Region.</p> <p>5. The issue of the 'NOC' is further subject to the provisions of Section 9-A of the Indian Aircraft Act, 1934 and those of any notifications issued there under from time to time and under which the applicant may be called upon by the Airports Authority of India to demolish in whole or in part the structure now being authorized vide this 'NOC'.</p> <p>6. No Radio/ TV Antenna, lighting arrestors, staircase, overhead water tank and attachment or fixtures of any kind shall project above the height indicated at Para 1 above.</p> <p>7. Day & Nights marking with both main and standby power supply should be provided as per ICAO standard.</p>					
<p>for AIRPORTS AUTHORITY OF INDIA</p> <p style="text-align: center;"><i>Malay Datta</i> (Malay Datta) General Manager (ATM) Chairman, RNOC Committee</p>					
<p>Copy for information to:</p> <p>1) RED, NER, AAI, LGBI Airport, Guwahati.</p> <p>2) GM(NOC), AAI, Sardarjung Airport, R.G. Bhawan, NewDelhi-03</p> <p>3) Airport Director, Mohanbari Airport, Dibrugarh.</p>					



भारतीय विमानपत्तन प्राधिकरण
AIRPORTS AUTHORITY OF INDIA

संदर्भ संख्या :
Ref. No. :

दिनांक :
Date. :

AAI/GHT/ATM/NOCAS/NOC/REVALIDATE

04/12/2018

To,

Mr Siddharth Singh, IAS

Project Director

Assam Urban Infrastructure Investment Program

Guwahati- 05

Reference No : ADB/AUIIP/SLF SITE/66/2012/282 dated 04/12/2018, received today 04/12/2018.

Sub: Application for Revalidation of NOC from AAI (height clearance) for the ongoing sanitary landfill project in Ghoramara, Dibrugarh.

Sir,

With reference to the application on the above subject, the NOC with reference No AAI/NER/ATM-50/NOC/3601-04 dated 28/06/2013, is hereby validated for a further period of three years with validity till 27/06/2021. The other terms and conditions as given in the NOC with reference No AAI/NER/ATM-50/NOC/3601-04 dated 28/06/2013 remains same and shall strictly be adhered to.

Thanking you.

Yours sincerely


(R.G Lama)

GM(ATM) NER

Regional Headquarters NER AAI

Guwahati- 781015

Appendix 5: Tree felling NOC from DFO, Dibrugarh


GOVT. OF ASSAM
ENVIRONMENT & FORESTS DEPARTMENT
OFFICE OF THE DIVISIONAL FOREST OFFICER::DIBRUGARH DIVISION
DIBRUGARH:
Telephone No. 0373 – 2318096 E-mail: dfo.t.dibrugarh@gmail.com

LETTER NO. B/GC/87/R.S. Tree Cutting/2018/5572-22 DT. 13/12/2018.

To, ✓ The Project Director,
AUHP, 3rd Floor, Tripti Tower,
Ganeshguri, Guwahati -05,
Assam




Sub:- Uprooting of tree standing on the PWD Roadside near about 100 meters short of Lekai Thakurthan.

Ref:- Your letter No. AUHP/321/2018/99, dtd. 03-12-2018 and this office letter No. B/GC/87/R.S. Tree cutting/2018/5131-32, dtd 08-11-2018.

Sir,
In continuation to this office letter no. cited above, you are hereby grant permission for felling of the said trees on conditions under below-

1. Felling should be done in presence of forest staff.
2. Out turn of the same to be transported to nearest forest Depot at Khanikar.
3. While felling attention may be taken not to disrupt the vehicular traffic and public.

This is for favour of your kind information and necessary onward action.

Yours faithfully,

Divisional Forest Officer,
Dibrugarh Division,
Dibrugarh

Copy to the Range Forest Officer, Dibrugarh Range, Dibrugarh for his information and necessary action.

1
Divisional Forest Officer,
Dibrugarh Division,
Dibrugarh

Appendix 6: Environment Monitoring, Health & Safety budget

Sr. No.	Contract	Tentative EHS Budget in Rupees
1	AUIIP/PR-1/GUW/WS/01 - M/s Tirupati Cement Products (Guwahati)	11,64,370.00 (2019)
2	AUIIP/PR-1/GUW/WS/02A & 02B - M/S Shivam Transcon Pvt Ltd (Guwahati)	33,65,090.00 (2016-2019)
3	AUIIP/PR-1/DIB/SWM-01A - M/s Badri Rai & Co (Dibrugarh)	10,98,920.00 (2018-2019)
4	AUIIP/PR-1/DIB/SWM-01B - M/s Milan Dutta-Blackberry Overseas Pvt.Ltd.-Alfa-Thermaltd.(Jv) (Dibrugarh)	13,00,000.00 (2019-2020)

Appendix 7: Sample PUC certificate for vehicle & equipment

Package: AUIP/PR-1/GUW/WS/01 - M/s Tirupati Cement Products (Guwahati)

POLLUTION UNDER CONTROL CERTIFICATE
(UNDER CMVR 1989)

Vehicle Registra. No: **AS01DF8938**

Date of Issue: **19/Jul/2018** Valid upto: **18/Jan/2019**

Pollution Level	
Co (%)	
HC (ppm)	
SD(HSU)	27.8

PUC Certificate issued by: **SAETS** 01/2012

AUTHORISED BY TRANSPORT DEPT. GOVT OF ASSAM
S DEKA M/s Shivam Auto Emission Testing
 Station, V I P Road, Sixmile, M:6900532656


Serial No.: D02/2010004225
 Make: HYDRA Fuel: Diesel
 Model: ESCORTS Reg. Year: 2017
 Category: Others Test Time: 13:53:48
Validity : 6 months Test Fee (Rs) : 130.00
 Spedometer Reading(kms) : x
 Engine Number:- 61777
 Chasis Number:- 38720
 vehicle Color:- YELLOW
 Driver: x
 Owner : Tirupati Cement Products

	FLOSB		CYCLE		MEAN	
	MIN RPM	MAX RPM	OIL TEMP.			
	855	4152	76			
S.No	MIN RPM	MAX RPM	X /m	SDU %	Temp	
1	800	4160	2.52	70.0	75	
2	880	4120	0.79	28.6	75	
3	880	4190	0.77	28.3	75	
4	800	4070	0.73	27.0	75	
5	800	4150	0.74	27.4	75	
Mean			0.75	27.8		

Certified that this vehicle's Smoke Density conform to the standards prescribed under Rule 115(2) of CMV Rules, 1989

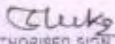
Valid UpTo **18/Jan/2019** Grade **A**

Seal Of Testing Name of Authorised Signatory With Signature



SAETS
Date: 19/7/18

SHIVAM AUTO EMISSION TESTING STATION



AUTHORISED SIGNATURE

POLLUTION UNDER CONTROL CERTIFICATE

Registration No: AS-01-DG-3275
A-30841

Issued on: 08/12/2018
Valid upto: 07/06/2019

CO (%) HC (ppm) 28.4 SD (HSU)	AS-01 DG-3275
-------------------------------------	--------------------------

Signature: _____
Licence No. And Seal: 05/05

MA MANASA AET STATION TEST REPORT

AUTHORISED BY TRANSPORT DEPT. GOVT OF ASSAM
 MA Manasa AETS, Bhangagarh, G.S. Road.

Vehicle Registration No	AS-01-DG-3275	Test Fee	130.00
Year of Registration	2017	Fuel	Diesel
Speedometer Reading		
Engine Number	1720030		
Chassis Number	11515	Vehicle Make	TEREX.
Vehicle Color		Vehicle Model	LTB 844S X4
I.D. Number	ASDP000224	Driver
Time	12.40 PM	Owner	SHIVAM TRANSCON P. LTD
Date	08/12/2018		

Flushing Cycle Mean : RPM Mean : 00712 RPM Max : 02102

Sl. No.	RPM min	RPM max	K m-l	HSU%	OTP C
1	00718	02080	1.65	29.5	63.20
2	00719	02072	1.65	30.2	63.96
3	00692	02138	1.70	19.0	61.05
4	00719	02117	1.65	28.8	60.80
5	00718	02041	1.24	26.7	60.40
6	00597	02041	1.56	25.4	56.24
Mean	00712	02102	1.66	28.4	62.25

Certified that this vehicle's smoke density conform to the standards prescribed under Rule 115(2) of CMV Rules, 1989
 Validity - 6 months
 Valid Up To: 07/06/2019 Grade A

Seal of Testing Centre: _____
 Name of Authorized Signatory with Signature: _____
MA MANASA AET STATION

AUIIP/PR-1/DIB/SWM-01B - M/s Milan Dutta- Blackberry Overseas Pvt.Ltd.-Alfa-Thermaltd.(Jv) (Dibrugarh)

POLLUTION UNDER CONTROL CERTIFICATE
(UNDER CMV RULES 1989)

Registration No. **AS25/CC-7665**

Issue on: **29/12/2017** Valid upto: **30/06/2019**

CO%	
HC (ppm)	
SD (HSU)	

Pollution (HSU) **0**

PUC Certificate issue **02-12-2001** Licence No. and Seal **02-12-2001**

Signature *[Signature]*

**AS25C
C7665**

POLLUTION TESTING CENTRE
L No. 12 / 2001
Dibrugarh
DIBRUGARH
ENTERPRISE

TEST REPORT

AUTHORISED BY **TRANSPORT DEPT. GOVT OF ASSAM**
M/S P. K. ENTERPRISE, A. T. ROAD DIBRUGARH- 9954777616

Vehicle Registration No.	AS25/CC-7665	Test Fee:	130.00
Year of Registration	29/12/2017	Fuel	Diesel
Speedometer Reading	0		-
Engine Number	3610243		-
Chassis Number	G13314	Vehicle Make	Tata
Vehicle Color	Silver	Vehicle Model	DUMPER
LD Number	ASDP016008	Driver	SELF
Time	01:30 PM	Owner	DHANANJOY TALUKDAR
Date	21/12/2018		

Flushing Cycle Mean : RPM Mean : 00784 RPM Max : 01625

Sl. No.	RPM min	RPM max	K m-1	HSU%	OTP C
1	00794	01640	2.40	56.5	77.60
2	00775	01601	2.45	58.0	75.74
3	00781	01683	2.36	55.7	77.60
4	00788	01578	2.39	58.0	75.89
Mean	00784	01625	2.40	57.0	76.71

Certified that this vehicle's smoke density conform to the standards prescribed under Rule 115(2) of CMV Rules, 1989

Validity : 6 months

Valid Upto: 30/06/2019

Seal Of Testing

Name of Authorised Signatory With Signature *[Signature]*

Pollution Testing

POLLUTION UNDER CONTROL CERTIFICATE
AS-1 (EC-4618 MV RULES 1989)

Registration No. **AS-4-EC-4618** : **04/02/2019**

Issue on: _____ Valid upto _____

CO (%)	19.5
HC (ppm)	19.5

Pollution level: **AS-01-EC-4618**

PUC Certificate No. _____ Licence No. and Seal _____

Signature: *R. Majumder*

Sl. No.

TEST REPORT

AUTHORISED BY TRANSPORT DEPT. GOVT OF ASSAM
G.M.PLOT,NO-2,STN ROAD,PO DULAJAN,DIST DIBRUGARH.

Vehicle Registration No.	AS-4-EC-4618	Test Fee:	130.00
Year of Registration	11/02/2013	Fuel	Diesel
Speedometer Reading	0		
Engine Number	5651	Vehicle Make	Tata
Chassis Number	4660	Vehicle Model	TIPPER
Vehicle Color	NA	Driver	DRIVER
I.D. Number	ASDP021739	Owner	M/S BADRI RAI & CO.
Time	12:49 AM		
Date	05/08/2018		

Flushing Cycle Mean : RPM Mean : 00716 RPM Max : 01621

Sl. No.	RPM min	RPM max	K m-l	HSU%	OTP C
1	00714	01600	1.66	19.5	61.80
2	00743	01661	1.62	19.0	63.04
3	00708	01661	1.64	20.1	60.32
4	00701	01562	1.67	19.6	60.56
Mean	00716	01621	1.65	19.5	61.43

Certified that this vehicle's smoke density conform to the standards prescribed under Rule 115(2) of CMV Rules, 1989

Validity : 6 months

Valid Up To : **04/02/2019**

Grade **A**



Name of Authorised Signatory With Signature



file://D:\PCControl\PCControl\Data\TestReport.html

Appendix 8: Sample Traffic Management Plan

HEALTH, SAFETY AND ENVIRONMENTAL OPERATION CONTROL PROCEDURES

Traffic Management Plan

Name of Project: Construction of transmission main pipelines and allied works in south east Guwahati water supply project

1. **Purpose:** The proposed project “Construction of transmission main pipelines and allied works in south east Guwahati water supply project” is a part of Guwahati water supply project.
2. **Scope :** The procedure is applicable to M/s Tirupati Cement Products
3. **Responsibility:** It is the responsibility of the construction manager and all departmental heads to implement this procedure and ensure that delegated staff under their supervision carries it out.
4. **Legal Requirements:** The BOCW Act, 1996 &, Central Rule 1998 & Motor Vehicle Act 1998.

5. Requirements

5.1 General:

- i.* All road works create inconvenience and area potential hazard to safety of all road users and those employed in carrying out the work.
- ii.* All the effects should be reduced to minimum and to ensure that the works are properly guarded, lighted and signed.
- iii.* A clearance early warning of any obstruction to all road users should be provided.
- iv.* All areas where work is going on should be clearly demarcated by hard barricading and entry into these areas should be restricted to only authorize personnel.

5.2 Planning Stage:

- i.* Particular attention should be given to
 1. Traffic Signs
 2. Cones
 3. Barriers
 4. Road hazard warning lights
 5. Information boards
 6. Site lighting
- ii.* Consider necessity of traffic control systems such as temporary traffic lights or Stop/Go boards
- iii.* Access should be planned to eliminate dangerous movements of site traffic (eg. Reversing of vehicles) and personnel (eg. Crossing of dual carriageways)
- iv.* Provision of adequate lighting while working at night
- v.* All persons working on a road shall wear highly visible jackets

5.3 On Site: The working space shall be defined and “A PLACE FOR EVERY THING AND EVERY THING IN ITS PLACE” to be followed.

5.4 Operators/Drivers:

- i.* Only experienced operators and drivers with valid licenses have been appointed.
- ii.* Copies of licenses have been collected.
- iii.* Refreshment training conducted for all operators and drivers.

5.5 Equipment:

- i.* Drivers are to make a daily visual inspection of their vehicles including steering, brakes, mirrors, lights, horn, tires and wind shield wipers.
- ii.* Safety department along with plant & machinery department shall check the vehicles on monthly basis.
- iii.* All vehicles should have reverse horn and it should be in working condition.
- iv.* Preventive maintenance schedule has to be followed strictly for all vehicles.

5.6 Roads : For safe operation following measures are taken

- i.* Safe width of road has been provided.
- ii.* Flag man deployed at every traffic point to control vehicle and pedestrians
- iii.* Speed limit of 10kmph to be implemented within site.
- iv.* Caution boards to be placed at site.
- v.* Workers are working with reflective jackets and required PPEs.
- vi.* Road for use by pedestrians has been identified.
- vii.* High noise intensity reverses horn used in vehicles.
- viii.* Dos and Don'ts displayed at site office.

5.7 Loading & Unloading:

- i.* Only authorize person to engage for loading or unloading
- ii.* Materials loaded within permitted safe load limit for vehicles
- iii.* Ensuring sand/soil loaded vehicles are covered while transporting.
- iv.* During toolbox talks intimation has been delivered to all drivers/operators that when the driver leaves the driving seat, engine of the vehicle should be switched off, gear engaged and parking brakes applied. On slopes wheel blocks shall be applied.
- v.* Helpers have been provided with all vehicles.
- vi.* After unloading, the banksman ensuring that he tipper is lowered before moving.
- vii.* Turn buckle and side stoppers used while transporting as required.

5.8 Working Area:

- i.* The working area has been restricted from un-authorized entry.
- ii.* The working space has been defined.
- iii.* Particular attention has been taken in working area
 - 1. Traffic Signs
 - 2. Cones
 - 3. Barriers
 - 4. Information boards
 - 5. Site lighting
- iv.* All personnel wear highly visible jackets.

Appendix 9: Sample Spoil Management Plan

Package: AUIP/PR-1/GUW/WS/01 - M/s Tirupati Cement Products (Guwahati)

HEALTH, SAFETY AND ENVIRONMENTAL OPERATION CONTROL PROCEDURES

Spoil Management Plan

Name of Project: Construction of transmission main pipelines and allied works in south east Guwahati water supply project

1. **Purpose:** To make a procedure to reduce & manage the spoil generated and reuse related to construction works.
2. **Scope :** The procedure is applicable to M/s Tirupati Cement Products
3. **Responsibility:** Project In-charge is responsible for its implementation.
4. **General Hierarchy of control:**
 - *PREVENT*
 - *REDUCE*
 - *REUSE*
 - *RECYCLE*
 - *RECOVER ENERGY*
 - *RESPONSIBLE DISPOSAL*
5. **Legal Requirements:**
 - The BOCW Act, 1996
 - Environmental Protection Act, 1986
 - The Water [Prevention & Control of Pollution] act, 1974
 - The Water [Prevention & Control of Pollution] CASs act, 1977 as amended in 2003
 - The Air [Prevention & Control of Pollution] act, 1981
 - The hazardous waste (Management & Handling) Rules, 1989
 - Biomedical waste (Management & Handling) Rules, 1998
 - Municipal Solid waste (Management & Handling) Rules, 2000
 - Noise Pollution Regulation & Control Rules, 2000
 - Battery (Management & Handling) Rules, 2001
6. **Requirements**
 - **Procedure:**
 - i.* Spoil volume calculations: estimate the volume of spoils produced from each of the construction sites.
 - ii.* Characterization of spoil : Based on the type of spoil, characterization is done (sand stone, mud mix, reusable materials).
 - iii.* Adopt spoil reduce/reuse opportunities
 - iv.* An overview of the assessment methodology to be used is mentioned below
 1. Consideration of likely spoil characteristic
 2. Identification of possible reuse sites
 3. Screening of possible reuse opportunities

4. Identification of possible safe disposal sites for spoil: Those spoils which can't be reused shall be properly disposed in designated areas. Such disposal areas shall be identified in project location. Such disposal areas shall be safe from environmental aspects and there should not be any legal or resettlement issue. The local administration must be consulted and permission be obtained from them, if required.

- **Identification & assessment of soil aspects & impacts:**
 - i.* There is stock yard assessed and identified jointly for dumping and storing the excess earth produced from pipe laying operation.
 - ii.* During transportation of soil, it is ensured that the vehicle is covered with tarpaulin and no dust flies off.

7. Spoil : Volume, characteristic and minimization

- Volume: Not confirmed.
- Characteristic : Both ordinary and hard soil
- Minimization: Excavation being done as per drawings only.

8. Spoil: Reuse opportunities, Identification and assessment

- Approximately half of the soil is backfilled as cushion over the pipe line.
- Balance soil is removed from site

9. Spoil Transportation Methodology

- Extra soil will be shifted by truck/dumper/tractor-trolley from site to dump yard

10. Other aspects :The key aspects of potential impact are listed in table below

Aspects	Potential Impacts
Air Quality	Potential for high winds generating air borne dust from movement of vehicles
Surface & Ground water	No potential impact on ground or surface water
Noise	Associated with spoil handling, haulage & storage
Traffic	Increase in traffic due to spoil haulage
Land Use	Lad used for dumping is a private low lying land and NOC from the owner has been obtained for dumping.

Shivam Transcon Pvt.Ltd.

59, Zoo Narangi Road, Geeta Nagar,
Guwahati- 781021
Ph.No: 2416960, 2417548
email: shivam2000in@yahoo.com,
Visit us our website: www.shivamtranscon.com



Ref: _____

Date: _____

**HEALTH SAFETY AND ENVIORNMENTAL OPRATION CONTROL PROCEDURES
SPOIL MANAGEMENT PLAN (TMP)**

Construction of CWR project in Guwahati (Contract Package AUIIP/PR-1/GUW/WS-02A & 02B)

**Name of Project-> Clear Water Reservoir Package 02A- Gopalnagar, Kenduguri, Northjyoti Nagar
And Package 02B- Hengrabari, Nabajyoti Nagar, Basistha Guwahati ASSAM**

1.0	PURPOSE
	To make a procedure to reduce and manage the spoil generated and reuse related to Construction works.
2.0	SCOPE
	The procedure is applicable to M/s Shivam Transcon Pvt.Ltd.
3.1	DEFINITIONS
	Something that is discarded or going to be discarded
3.2	RESPONSIBILITY:
	Project In charge is responsible for its implementation
4.0	GENERAL HIERARCHY OF CONTROL
	<ul style="list-style-type: none"> > PREVENT > REDUCE > REUSE > RECYCLE > RECOVERY ENERGY > RESPONSBLE DISPOSAL
5.0	LEGAL REQUIREMENT
	<ul style="list-style-type: none"> > The Building and Other Construction Workers (Regulations of Employment and Conditions of Service) Act 1996 and Central Rule 1998 Rule > Environmental Protection Act 1986 > The Water [Prevention & Control Of Pollution] Act-1974 and Rules 1975 > The Water [Prevention & Control Of Pollution] CASs Act-1977 and Rules-1978 as amended in 2003 > The Air [Prevention & Control Of Pollution] Act - 1981 and Rules 1983 > The Environment [Protection] Act-1986 & Rules-1986 as amended from time to time > The Hazardous Waste (Management and Handling) Rules, 1989 as amended from time to time > Bio-Medical waste (Management & Handling) Rules 1998 > Municipal Solid Waste (Management and Handling) Rules 2000 > Noise Pollution Regulation & Control rules, 2000. > Battery (Management and Handling) rules, 2001.
6.0	REQUIREMENTS
6.1	Procedure:-
	<ul style="list-style-type: none"> > Spoil volume calculations: Estimate the volumes of spoils produced from each of the construction sites. > Characterization of spoil: Based on the type of spoil; characterization is done (sand stone, mud mix materials, reusable materials) • Adopt Spoil Reduce Reuse Opportunities • An overview of the assessment methodology to be used is mentioned below <ul style="list-style-type: none"> > Consideration of likely spoil characteristics > Identification of possible reuse sites



Shivam Transcon Pvt.Ltd.

9, Zoo Narangi Road, Geeta Nagar,

Guwahati- 781021

Ph.No: 2416960, 2417548

mail: shivam2000in@yahoo.com,

visit us our website: www.shivamtranscon.com



Ref: _____

Date: _____

	<ul style="list-style-type: none"> > Screening of possible reuse opportunities > Identification of possible safe disposal sites for spoil. Those spoils which can't be reuse shall be properly disposed in designated areas such disposal areas should be identified in project locations. Such disposal areas should be safe from environmental aspects and there should be any legal and resettlement related issues. Such areas need to be identified and prior client approval should be obtained to use it as spoil disposal area. The local administration must be consulted and if required permission should be obtained from them. 																
6.2	Identification and Assessment of Soil Aspect and impacts <ul style="list-style-type: none"> > There is some place assessed and identified jointly Inside the Garden reach STP for Dumped and dressed the extra earth which is presently down from actual level. > During shifting through trucks we are ensuring that the trolley loaded is covered by tarpaulin and there is harm of dust pollution 																
7.0	SPOIL VOLUMES, CHARACTERISTICS AND MINIMIZATION <ul style="list-style-type: none"> > Volumes > Not conformed > Characteristics > Normal earth basically Clay types > Minimization <p>Excavation of earth to be done as per requirements only. No extra earth shall be excavated</p>																
8.0	Spoil Reuses Opportunities, Identification and Assessment <ul style="list-style-type: none"> > Some Cubic Metre of Spoils will be reused for backfilling of excavated shaft location > Balance spoils will be removed 																
9.0	Spoil Transportation Methodology <ul style="list-style-type: none"> > Extra earth will be shifted by Truck / Dumper from site to dumping yard > Address of dumping yard: Chunchali, Kanchan Nagar Po-Noonmati Dist-Guwahati, Assam- 781020 																
10.	Monitoring, Reporting, Review and Improvements <ul style="list-style-type: none"> > Monitoring, Reporting and all necessary improvements will be as required. 																
11	List of Relevant Guide Lines/ Documents																
12	References																
13	Related other Procedures																
	The key aspects of potential impacts are listed in table below																
14	<table border="1"> <thead> <tr> <th>Aspects</th> <th>Potential Impacts</th> </tr> </thead> <tbody> <tr> <td>Air Quality</td> <td>Potential for high winds generating airborne dust from the movement of vehicles and machineries</td> </tr> <tr> <td>Surface and Groundwater</td> <td>Contamination of water (surface and ground water)</td> </tr> <tr> <td>Noise</td> <td>Associated with spoil handling and haulage and</td> </tr> <tr> <td>storage Traffic</td> <td>Impacts associated with spoil haulage</td> </tr> <tr> <td>Land Use</td> <td>Land used for dumping is a government land, permission obtained from client and is down from actual ground level.</td> </tr> <tr> <td>Design specifications</td> <td>Limitations on opportunities to minimize spoil generation</td> </tr> <tr> <td>Sustainability</td> <td>Limited sites for storage, reuse opportunities</td> </tr> </tbody> </table>	Aspects	Potential Impacts	Air Quality	Potential for high winds generating airborne dust from the movement of vehicles and machineries	Surface and Groundwater	Contamination of water (surface and ground water)	Noise	Associated with spoil handling and haulage and	storage Traffic	Impacts associated with spoil haulage	Land Use	Land used for dumping is a government land, permission obtained from client and is down from actual ground level.	Design specifications	Limitations on opportunities to minimize spoil generation	Sustainability	Limited sites for storage, reuse opportunities
Aspects	Potential Impacts																
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Land Use	Land used for dumping is a government land, permission obtained from client and is down from actual ground level.																
Design specifications	Limitations on opportunities to minimize spoil generation																
Sustainability	Limited sites for storage, reuse opportunities																

DISPOSED SILT FROM July to December 2018 APPROXIMATELY-QUANTITY Not conformed.

ADDRESS OF DUMPING YARD- Kanchan Nagar PO-Noonmati

Dist- Guwahati Assam-781020



Appendix 10: Workman Compensation Policy certificate

Package: AUIP/PR-1/GUW/WS/01 - M/s Tirupati Cement Products (Guwahati)



Policy No: 0408002718P109024012



EMPLOYEES COMPENSATION INSURANCE POLICY SCHEDULE

Policy No.	0408002718P109024012		Prev. Pol. No.	0408002718P100383014	
Name Of Insured/ID	M/s TIRUPATI CEMENT PRODUCTS & AUIP / 23028381028				
Tel.(O)	Fix		Tel.(R)		Mobile
Business/Occupation	None		Email		
Period of Insurance	From	00:00 Hrs of 15/10/2018	To	Midnight of 14/10/2019	

CO-INSURANCE DETAILS:	UIC 040800 ; 100%
PREMIUM:	TWENTY-ONE THOUSAND SEVENTY-ONE RUPEES ONLY

Laws: The Policy covers Liability of the Insured under the following Law(s) shown as covered, subject to claim being otherwise admissible as per terms, conditions and exclusions of the Policy and subject to Limit of Indemnity as stipulated against each Law:

LAW	LIMIT OF INDEMNITY
Employee's Compensation Act, 1923 and subsequent amendments thereof prior to the date of Issue of Policy.	Subject otherwise, to the term, condition & Exclusion of the Policy, the amount of liability incurred by the Insured

	Common Law	Subject otherwise, to the terms, conditions & Exclusions of the Policy, the amount of liability incurred by the Insured, but not exceeding:-
--	------------	--

- a) Limit Per Employee for any number of accidents during Period of Insurance
₹ 0
- b) Limit Per Accident for any number of Employees
₹ 0
- c) Aggregate Limit for all accidents and claims arising therefrom during the Period of Insurance
₹ 0

Net Premium	₹ 21,071.00
IGST(18%)	₹ 3,793.00
Stamp Duty	₹ 1.00
Total	₹ 24,864.00
Receipt No.	10104080018109368270
Receipt Date	11/10/2018

Agency/Broker Code:	AGD0012425
Dev. Officer Code:	

Handwritten notes and stamps in blue ink, including a date stamp '11/10/2018' and some illegible text.

Policy No:0408002718P1090240

Details of Employees Covered:

Description of Employees	Worker Type	Declared Number of Employees	Declared Monthly Wages/Employee (₹)	Declared Wages during the Period of Insurance (₹)	Place/Places of Employment	Trade Category	Sub Trade Category
	Skilled	2	9,620.00	230,880.00	CONSTRUCTION OF WATER SUPPLY TRANSMISSION MAIN PIPE LINE AND ALLIED WORKS IN SOUTH EAST GUWAHATI WATER SUPPLY PROJECT	SEWER AND ROAD CONTRACTORS	OPEN TRENCH WORK ONLY WHERE NO BLASTING AND TUNNELLING IS DONE AND WHERE THE DEPTH IN NO PART EXCEED
	Unskilled	8	8,000.00	768,000.00	CONSTRUCTION OF WATER SUPPLY TRANSMISSION MAIN PIPE LINE AND ALLIED WORKS IN SOUTH EAST GUWAHATI WATER SUPPLY PROJECT	SEWER AND ROAD CONTRACTORS	OPEN TRENCH WORK ONLY WHERE NO BLASTING AND TUNNELLING IS DONE AND WHERE THE DEPTH IN NO PART EXCEED

Subject of following clauses:

Special Condition :
Subject to terms and Conditions of Employees Compensation Insurance Policy attached herewith.

Territory :- DELHI

Jurisdiction :- DELHI

Subsidiaries :-

Particular Of Work :- CONSTRUCTION OF WATER SUPPLY TRANSMISSION MAIN PIPE LINE AND ALLIED WORKS IN SOUTH EAST GUWAHATI WATER SUPPLY PROJECT.

Location Of Risk :- CONSTRUCTION OF WATER SUPPLY TRANSMISSION MAIN PIPE LINE AND ALLIED WORKS IN SOUTH EAST GUWAHATI WATER SUPPLY PROJECT.

Add-ons/ Extension:-

Cover	SI/Employee(₹)	Total SI(₹)	Premium(₹)
JointPolicy		998880	

Customer GST/UIN No.:	18AACF2702L2Z5	Office GST No.:	07AAACU5552CLZL
SAC Code:	9971	Invoice No. & Date:	27181109024012 & 11/10/2018

Amount Subject to Reverse Charges-NIL

Anti Money Laundering Clause:- In the event of a claim under the policy exceeding ₹ 1 lakh or a claim for refund of premium exceeding ₹ 1 lakh, the insured will comply with the provisions of AML policy of the company. The AML policy is available in all operating offices as well as Company's web-site.

Date of Proposal and Declaration: 15/10/2018

IN WITNESS WHEREOF, the undersigned being duly authorised has hereunto set his/her hand at DO B NEW DELHI 040800 on this 11th day of October ,2018

For United India Insurance Co. Ltd.

Consolidated Insurance Policy Stamps
Consolidated Insurance Policy Stamp
Prepaid as per Order No. F.No. 10/24489/CES
(HQ)/Consolidated Stamp
dated 22-09-2017, of Collector of Stamps,
5, Shammath Marg, New Delhi

<http://gcocore.uicc.in/Configurator/HTMLReportSource/0k1hr451hiiznm3qxtpoukEmplo...> 24/10/2

Package: AUIP/PR-1/GUW/WS/02A & 02B - M/S Shivam Transcon Pvt Ltd (Guwahati)

**G.S. ROAD, GUWAHATI, 3rd FLOOR
CHRISTIANBASTI, AMARAVATI PATH
G.S. ROAD, GUWAHATI-781005**

EMPLOYERS LIABILITY-OTHER THAN COLLIERIES POLICY SCHEDULE

Policy No. : 321200/48/2018/3118	Prev. Policy No. : 321200/48/2017/2610
Cover Note No. : -	Cover Note Date : -
Insured's Code : 51140356	Issue Office code : 321200
Insured's Name : SHIVAM TRANSCON PRIVATE LIMITED (GSTIN: 18AAAC54853R1ZG)	Issue Office Name : DO II GUWAHATI (GSTIN: 18AAACT0627R4ZV)
Address : 55, ZOO NARENGI ROAD, GEETA NAGAR, GUWAHATI-21 KAMRUJ	Address : AMARAVATI PATH CHRISTIAN BASTI GUWAHATI GUWAHATI ASSAM 781005
Tel./Fax/Email : / / / NA	Tel./Fax/Email : (0361)2345277/ 2341773 / NA / digantaz@orientalinsurance.co.in

Agent/Broker Details

Dev.Off Code : NE000000145 MS. EASTER BRAHMA

Agent/Broker : BA0000108115 MR. ANIL KR. AGARWALLA

Address : RAMNARAYAN SHIW PRASAD & CO.G.S.ROAD,ULUBARI,GHY-7,ASSAM.,GUWAHATI,ASSAM,781001

Tel/Fax/Email : 9864018463/9864018463/NA

Period of Insurance : FROM 00:00 ON 23/02/2018 TO MIDNIGHT OF 22/02/2019

Collection No. & Dt : CHQ 4045011631 - 20/02/2018 GST INVOICE NO : 181610063051

Grand Premium	58,752	GST	10576	Stamp Duty	58	Total	69,328
---------------	--------	-----	-------	------------	----	--------------	---------------

Co-insurance Details : Nil.

Laws

Laws : Indemnity against legal liability to all employees, Whether or not coming within the definition of the term Workmen) under the W.C Act prior to the date of issue of the policy, the Fatal Accidents Act, 1855 and at Common Law.

Risk Information

Place : GUWAHATI   For and on behalf of The Oriental Insurance Company Limited

Date : 20/02/2018

In case of any query regarding the Policy please call Toll Free No. 1800 11 8485 and 011 33208485.

City : U66010DL1947GOI007158 All the Amounts mentioned in this policy are in Indian Rupees.

IRDA Regn. No. 556 - Now you can buy and renew selected policies online at www.orientalinsurance.org.in



Authorized Signatory

Page 1 of 3

Attached to and forming part of policy number 321200/48/2018/3118

Details of Employees with Monthly Wages Above Rs.8000/-

Sr. No.	Est. No. of Emps	Cont ract Emps	Occupation	Estimated totalsalary /wages/other earnings	Value of food/qtrs/ other considerations	Estimated Total earnings	Table	Place of Employment
1	5		Buldoers - All employees engaged in shop or yard or in construction/demolition of buildings and other civil construction like dams, bridges etc. incl. Excavation Excl. blasting and tunneling	144,000		144,000	A	1

Details of Employees with Monthly Wages Above Rs.8000/-

Sr. No.	Est. No. of Emps	Cont ract Emps	Occupation	Estimated totalsalary /wages/other earnings	Value of food/qtrs/ other considerations	Estimated Total earnings	Table	Place of Employment
1	20		Buldoers - All employees engaged in shop or yard or in construction/demolition of buildings and other civil construction like dams, bridges etc. incl. Excavation Excl. blasting and tunneling	96,000		96,000	A	2

Contract Details

Principal Name : ASSAM URBAN INFRASTRUCTURE INVESTMENT PROGRAM(AUIIP),3RD FLOOR, TRIPTI TOWER, GANESHGURI,
Site of work : GOPALNAGAR, NORTH JYOTI NAGAR, KENDUGURI
Trade description : Construction of storage reservoirs of various capacities at three locations, approach road and allied works in South East Guwahati water supply projects(Package AUIIP/PR-1/GUWWS/02A)
Address : ZOO NARENGI ROAD, GEETA NAGAR, GUWAHATI
State : ASSAM
City : KAMRUP
Pincode : /81021

Place: GUWAHATI
 Date: 20/02/2018



For and on behalf of
 The Oriental Insurance Company Limited



Authorized Signatory

In case of any query regarding the Policy please call Toll Free No. 1800 11 8485 and 011 33208485

CIN: U66010DL1947GOI007158 All the Amounts mentioned in this policy are in Indian Rupees

Page 2 of 3

IRDA Reg. No. 556 - Now you can buy and renew selected policies online at www.oriental-insurance.org.in

Attached to and forming part of policy number 321200/48/2018/3118

The Insurance under this policy is extended to cover risks of (as per forms attached).
Total Annual Wages of all Employees *120 times.

Total Premium in words Indian Rupees Sixty-Nine Thousand Three Hundred Twenty-Eight Only

The Insurance under this policy is subject to Warranties & Clauses(as per forms attached).

"It is hereby agreed that this policy doesnot cover medical expenses" as required under the provision 2A of the Workmen Compensation Act, 1923(as amended) and described above.

Subject to adjustment in the terms of Condition 5.The estimated amount of wages/salaries & other earnings on which premium is based.

In the event of a claim under the policy exceeding Rs. 1 lac or a claim for refund of premium exceeding Rs. 1 lac,the insured will comply with the provisions of the AML policy of the Company.The AML policy is available in all our operating offices as well as Company's website.

Not applicable

Warranted that in case of dishonour of premium cheque(s) the Company shall not be liable under the policy and the policy shall be void ab initio (from inception).

In witness whereof the undersigned being authorised by and on behalf of the Company has/have herein to set his/their hands at DO II GUWAHATI (GSTIN: 18BAACT0627R4ZV) on 20TH DAY OF FEBRUARY 2018.

Entered By MR. K.S. JOSWAMI
Examined By MS. EASHER BRAHMA

Policy Printed By : 370517 IP : 10.32.7.14
Policy Printed On : 21-FEB-18 11:05:32 MAC :

For and on behalf of
The Oriental Insurance Company Limited

Authorized Signatory

Place GUWAHATI
Date : 20/02/2018



ICA 4810-000

For and on behalf of
The Oriental Insurance Company Limited


Authorized Signatory

In case of any query regarding the Policy please call Toll Free No. 1800 11 8485 and 011 33208485

CIN: U66010DL1947GOI007158 All the Amounts mentioned in this policy are in Indian Rupees

Page 3 of 3

IRDA Regn. No. 556 Now you can buy and renew selected policies online at www.orientalinsurance.org.in

Package: AUIP/PR-1/DIB/SWM-01B - M/s Milan Dutta- Blackberry Overseas Pvt.Ltd.- Alfa-Thermaltd.(Jv) (Dibrugarh)

THE ORIENTAL INSURANCE COMPANY
City Directorate Office No. 3
M.L. Nehru Road, Guha Lodge
Panbazar, Guwahati-781001

EMPLOYERS LIABILITY-OTHER THAN COLLIERIES POLICY SCHEDULE

Policy No. : 321100/48/2018/984	Prev. Policy No. : -
Cover Note No. : -	Cover Note Date : -
Insured's Code : 84218675	Issue Office code : 321100
Insured's Name : MILAN DUTTA (GSTIN: 0)	Issue Office Name : DO I GUWAHATI (GSTIN: 18AACT0627R42V)
Address : HNO-48, LAMB ROAD LATASIL UZANBAZAR, GUWAHATI-01 KAMRUP ASSAM 781001	Address : GUHA LODGE M.L NEHRU ROAD PANBAZAR GUWAHATI ASSAM 781001
Tel./Fax/Email : 7002463136 / 7002463138 / NA	Tel./Fax/Email : (0361)2518676/2518678 / NA / sanyal.saha@orientalinsurance.co.in

Agent/Broker Details

Dev.Off.Code : NA000003500 MR. C. CHAUDHURY

Agent/Broker : BA0000045547 MS. M. GUHA

Address : GUHA COMPLEX, G.S. ROAD,, P/O ULUBARI, GUWAHATI -7, GUWAHATI, ASSAM, 781007

Tel/Fax/Email : 9707836103/NA

Period of Insurance : FROM 13:00 ON 30/01/2018 TO MIDNIGHT OF 29/01/2019

Collection No. & Dt. : CHQ 4038003291 - 30/01/2018 GST INVOICE NO : 181810044124

Gross Premium : 32,052 GST : 5770 Stamp Duty : 32 Total : 37,822

Co-insurance Details : NIL

Laws

Laws : Indemnity against legal liability under the Fatal Accidents Act, 1955 and Common Law.

Risk Information


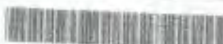
Details of Employees with Monthly Wages Below Rs.8000/-

Sr. No.	Est. No. of Emps	Contract Emps	Occupation	Estimated totalsalary /wages/other earnings	Value of food/qtrn/ other considerations	Estimated Total earnings	Table	Place of Employment
1	1	1	Construction alteration maintenance or repair work excl. Use of explosives	72,000		72,000	B	SWM PROJECT, THAKU RTHAN(LEKA), DI BRUGARH,

Contract Details


Place : GUWAHATI

Date : 30/01/2018

For and on behalf of
The Oriental Insurance Company Limited

In case of any query regarding the Policy please call Toll Free No. 1800 11 8485 and 011 33208485.



Authorized Signatory

CIN: U86010DL1947G0I007158 All the Amounts mentioned in this policy are in Indian Rupee

IRDA Regn. No. 556 - Now you can buy and renew selected policies online at www.orientalinsurance.org.in

Page 1 of 5

Attached to and forming part of policy number 321100/48/2018/984

Details of Employees with Monthly Wages Below Rs.8000/-

Sr. No.	Est. No. of Emps	Cont ract Emps	Occupation	Estimated totalsalary /wages/other earnings	Value of food/qtrs/ other considerations	Estimated Total earnings	Table	Place of Employment
1	1	1	Construction alteration maintenance or repair work excl. Use of explosives	72,000		72,000	B	SWM PROJECT,THAKU RTHAN(LEKAI),DI BRUGARH,

Details of Employees with Monthly Wages Below Rs.8000/-

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Details of Employees with Monthly Wages Below Rs.8000/-

Sr. No.	Est. No. of Emps	Cont ract Emps	Occupation	Estimated totalsalary /wages/other earnings	Value of food/qtrs/ other considerations	Estimated Total earnings	Table	Place of Employment
1	1	1	Construction alteration maintenance or repair work excl. Use of explosives	72,000		72,000	B	SWM PROJECT,THAKU RTHAN(LEKAI),DI BRUGARH,

Place : GUWAHATI

Date : 30/01/2018



For and on behalf of
The Oriental Insurance Company Limited

In case of any query regarding the Policy please call Toll Free No. 1800 11 8485 and 011 33206485.

CIN: U66010DL1947GOI007158 All the Amounts mentioned in this policy are in Indian Rupee

IRDA Regn. No. 556 - Now you can buy and renew selected policies online at www.orientalinsurance.org.in

Page 2 of 5

Attached to and forming part of policy number 321100/48/2018/984

Details of Employees with Monthly Wages Below Rs.8000/-

Sr. No.	Est. No. of Emps	Cont ract Emps	Occupation	Estimated totalsalary /wages/other earnings	Value of food/qtrts/ other considerations	Estimated Total earnings	Table	Place of Employment
1	1	1	Construction alteration maintenance or repair work excl. Use of explosives	72,000		72,000	B	SWM PROJECT,THAKU RTHAN(LEKAJ),DI BRUGARH,

Details of Employees with Monthly Wages Below Rs.8000/-

Sr. No.	Est. No. of Emps	Cont ract Emps	Occupation	Estimated totalsalary /wages/other earnings	Value of food/qtrts/ other considerations	Estimated Total earnings	Table	Place of Employment
1	1	1	Construction alteration maintenance or repair work excl. Use of explosives	84,000		84,000	B	SWM PROJECT,THAKU RTHAN(LEKAJ),DI BRUGARH,

Details of Employees with Monthly Wages Below Rs.8000/-

Sr. No.	Est. No. of Emps	Cont ract Emps	Occupation	Estimated totalsalary /wages/other earnings	Value of food/qtrts/ other considerations	Estimated Total earnings	Table	Place of Employment
1	1	1	Construction alteration maintenance or repair work excl. Use of explosives	84,000		84,000	B	SWM PROJECT,THAKU RTHAN(LEKAJ),DI BRUGARH,

Details of Employees with Monthly Wages Below Rs.8000/-

Sr. No.	Est. No. of Emps	Cont ract Emps	Occupation	Estimated totalsalary /wages/other earnings	Value of food/qtrts/ other considerations	Estimated Total earnings	Table	Place of Employment
1	1	1	Construction alteration maintenance or repair work excl. Use of explosives	84,000		84,000	B	SWM PROJECT,THAKU RTHAN(LEKAJ),DI BRUGARH,

Place : GUWAHATI

Date : 30/01/2018



For and on behalf of
The Oriental Insurance Company Limited

In case of any query regarding the Policy please call Toll Free No. 1800 11 8485 and 011 33208485.

CIN: U68010DL1947GOI007158 All the Amounts mentioned in this policy are in Indian Rupee

IRDA Regn. No. 556 - Now you can buy and renew selected policies online at www.orientalinsurance.org.in

Page 3 of 5

Policy No. 1122000157400100747
 Policy Period: 12/12/2017 to 12/12/2018
 Insured Person: [Redacted]
 Sum Insured (₹)
 - In respect of Any One Person: 15,00,000
 - In respect of Any One Accident or series of accidents arising out of one event: 35,00,000
 Total Limit for Sections: During Policy Period: 30,00,000
 The insurance under this Policy is subject to: [Redacted]

EXCESSES FOR SECTIONS I & II

Description	SA of claim amount subject to a minimum of (₹)	Limit	Each Claim
For Storage Acquisition Claims	SA of claim amount subject to a minimum of (₹)	50,000	each Claim
For Major Perils Claims as per Memo 6 of Section I	SA of claim amount subject to a minimum of (₹)	2,00,000	each Claim
For Maintenance Period Claims	SA of claim amount subject to a minimum of (₹)	10,000	each Claim

Particulars	Amount (₹)
[Redacted]	0
[Redacted]	0
[Redacted]	1,39,575.00
[Redacted]	0.00
[Redacted]	1,40,500.00

Particulars	Amount (₹)
[Redacted]	0.00
[Redacted]	0.00
[Redacted]	0.00
[Redacted]	10117
[Redacted]	10117

Warranty: effective date of policy is from the date of receipt of premium.
 All losses prior to date of payment of premium is excluded.

M/s. ASSAM URBAN INFRASTRUCTURE INVESTMENT PROGRAM
 SMC, GANESHWARI, GUWAHATI
 STATE GOVT

Witnessed by the undersigned [Redacted]
 IN No. 1122000157400100747, INBA Regn. No. 18
 [Redacted]



Appendix 11: Sample Tool Box talk and Induction training from Contractor

Package: AUIIP/PR-1/GUW/WS/01 - M/s Tirupati Cement Products (Guwahati)

HSE SITE INDUCTION

S.No	Date	Name of workers	Age	Gender	Signature	Remarks
123	08/07/18	Jodhi Pandit	46	M	Jodhi Pandit	
124	3/10/18	Ranjeet Singh	21(W)	F	Ranjeet Singh	
125	"	md. perwez	20(H)	M	MD PERWEZ	
126	"	Bhulan Kumar	18(H)	M	Bhulan Kumar	
127	"	Din Boudhy Rai	37(R)	M	Din Boudhy Rai	
128	25/10/18	Nareesh Pandit	24(W)	F	Nareesh Pandit	
129	"	Bhatai mukhia	23(W)	F	Bhatai mukhia	
130	"	Judendera Pandit	23(H)	M	Judendera Pandit	
131	"	loobind mukhia	22(W)	F	loobind mukhia	
132	16/11/18	Nareoj Kumar Singh	23(H)	M	Nareoj Kumar Singh	
133	13/12/18	Samresh Sharma	29(W)	F	Samresh Sharma	

S.No		Sute First aid		Register	Remarks
Date	Name of victim	Part of Body Injury	Treatment		
18/12/2018	Rajesh Sah	Back Injury	Dressing	सिंह	
19/12/2018	Pantu Kumar	Cut at Right hand middle finger	Dressing	सिंह	
20/12/2018	Arun Kumar	Cut at Right hand thumb	Dressing	सिंह	
21/12/2018	Ranvir Kumar	Right hand little finger	Dressing	सिंह	
22/12/2018	Mek mohamed Ansari	Left hand thumb	Dressing	सिंह	
23/12/2018	Bhulan Kumar	Left hand index finger	Dressing	सिंह	
24/12/2018	Ranveer Kumar	Right hand Ring finger	Dressing	सिंह	
25/12/2018	Subhan Alam	Left hand middle finger	Dressing	सिंह	

TOOL BOX TALK
 Topic:- Housekeeping at Site

PAGE NO. _____
 DATE 02 11 18

S.No	Name of workers	Category	Remarks
01	Ravesh Kumar	Ground	रिफॉर् 21
02	Ramjeev Kumar Singh	welder	पुता गृह R/E
03	Naveesh Pandit	welder	Abraon Pandit
04	Inoband mukhia	welder	गणेश 20/21
05	Bhutan mukhia	welder	एन/ए
06	Arun Kumar Sharma	fitter	Arun Kumar Sharma
07	NEK mohamed Ansari	Ruff	NEK Moha Ansari
08	Axvond Kumar Ram	Helper	ब्रह्मेश 20/21
09	Bhulan Kumar	Helper	गुण कर्मा 21/2
10	Jitendra Pandit	Helper	गणेश 24

(4)

Internal HSE Awareness training Report

Company Name: M/s Milan Dutta Blackberry Overseas Pvt Ltd & Alfa Thermaltd.(Jv)

Project Site Location: Lekai, Dibrugarh

Project Name: Solid waste Management

Date of training: 12th sept 2018

Timing of training: 11.30 AM

Content: (Tool Box talk)

1. Falling object
2. Accident and Incident Reporting
3. waste disposal & working with Cement and Reinforcement
5. Fire safety and Emergency plan and Response
6. Scaffold safety

SL.No	Name of Employee	Position	Signature
1.	Jiten Jatin	PM	<i>Jiten Jatin</i>
2.	Dhiren Paga	Site Engineer	<i>Dhiren Paga</i>
3.	Mangit Deba Barua	"	<i>Mangit Deba Barua</i>
4.	Kaustik Das	"	
5.	Momay Das	Supervisor	<i>M. Das</i>
6.	Jinti Das	HSE	<i>Jinti Das</i>
8.	Ratal Kalita	Electrician	<i>Ratal Kalita</i>
9.	Pasman Ali	cook	<i>P. Ali</i>
10.	Abdul Kalam	"	<i>A. K.</i>
11.	Subal Das	"	<i>Subal Das</i>
12.	Tarin Ali	"	<i>T. Ali</i>
13.	Mubarak Ali	"	<i>M. Ali</i>
14.	Sabikul Islam	"	<i>S. I.</i>
15.	Dilban Hussain	"	<i>D. H.</i>

SL. NO	Name of Employee	Position	Signature
16	Babu	4	Babu
17	Asrafal	4	Asrafal
18	Abdul Khan	4	ABDUL
19	Salman Khan	4	SALMAN
20	Nun Islam	4	NUN ISLAM
21	Sadam Hussain	4	SADAM
22	Razikul Islam	4	RAZIKUL
23	Rabikul Islam	4	RABIKUL
24	Pakha miya	4	Pakha
25	Rabi Das Ray	4	RABI DAS



Package: AUIP/PR-1/DIB/SWM-01A - M/s Badri Rai & Co (Dibrugarh)

**HSE AWARENESS PROGRAMME & SAFETY INDUCTION
TRAINING at
LEKAI – Dibrugarh, ASSAM**



M/S BADRI RAI & CO



Gathering of Our Workers at Site



Demonstration on PPE





Details discussion on PPE



Banner of HSE Awareness Program



Appendix 12: Safeguard Training for Contractor – from DMSC

ENVIRONMENTAL SAFEGUARD – REVIEW MEETING AND ENVIRONMENT, HEALTH & SAFETY TRAINING PROGRAM FOR CONTRACTORS – AUJIP

Safeguard review meeting cum training program has been conducted on safeguard compliance issues and application of Environmental Management Plan (EMP) at AUJIP office, Guwahati on 12th December 2018 and Dibrugarh on 15th December 2018

Meeting has been organized by Environment Specialist of DMSC. Environment Safeguard officer of PMU, Safeguard Compliance Officer of PIU, Site Engineers and Safety officer of contractors attended the review meeting cum training program.

The issues discussed like,

- Availability of safeguard officer
- Overall application of EMP and compliance of safety requirement
- Submission of safeguard documents
- Labour and Office Camp site management- requirement of proper sanitation and solid waste management and drinking water facility
- Disposal / utilization of overburden earth , rocks, spoil materials after work
- Maintenance of public access at construction site
- Work display board
- Storage of construction materials and specifically petroleum storage
- Occupational and public safety during construction
- Availability of first aid box
- Community safety – complete use of caution tape and barricade
- Traffic management and spoil management during laying of pipes (as per requirement)
- Requirement of Pollution Under Control (PUC)/ No Objection Certificate (NOC) from concerned department and renewal of the same before expiry
- Labour license and Workman Compensation Policy
- Requirement of monitoring data on air, noise and water
- Arrangement of Medical checkups camp for workers

Non compliance issues are discussed with contractors. All contractors agreed to submit all documents timely.

Annex 1 shows requirement of Environment, Health & Safety compliance as per ADB's policy

Attendance sheet attached as **Annex 2**



ENVIRONMENT, HEALTH AND SAFETY COMPLIANCE

- Immediate arrangement of renewal of labour license and Workman compensation policy in case of expiry. Labour license and WC Policy should cover sufficient numbers of workers.
- Submission of Currently valid PUC Certificate for all vehicles and equipments engaged in the project. Preparation of list of vehicle and equipment and PUC validity date
- Grievance/complaint register at work sites/camp office as per standard format.
- At labour camp site office display board showing all emergency contact no., contact no. of PIU, DSMC and display of Safety Officers' name and telephone number at work sites
- Use of safety caution board at site – which should contain emergency contact no. and work schedule
- Information to locals before start of work
- Maintaining accident register/ first aid register at camp/ site office
- First aid boxes with required first aid materials with valid dates at all work sites/camp site offices. Number should be sufficient
- Toilet & Drinking water facilities at work site. Proper storage of drinking water
- Fire fighting facilities (Fire Extinguisher, sand bucket) at vulnerable work sites/ labour camp/ site office/ combustible material storage site. Regular checking of expiry date of fire fighting equipment. Refilling immediately as per requirement
- In case of fuel storage, tray below fuel drum need to be placed
- Non storage of petroleum product within office room and access – source prevention for any fire hazard
- Fire exit area should be cleaned and sufficient arrangement of lighting
- Proper storage of construction materials - wastage of materials to be checked. Slope should be avoided
- Rubber mat (ISI marked) at high voltage electrical switch board area
- Filling up trenches and restoration of road after pipe laying at earliest
- Arrangement of shoring, if required
- Arrangement of sufficient light at night work location
- Arrangement of Royalty receipt copy from material supply – particularly aggregates and sand
- Removal / disposal of overburden/surplus earth/ stone, sludge materials at earliest without any accumulation at working sites - Use of overburden materials at site (preferred option)
- No objection certificate from pollution control board for use of DG set(5 KVA and above capacity)
- Regular water sprinkling (at least 2-3 times in a day during dry period) at construction site for arresting of dust – record should be maintain at site
- Covering of materials carrying vehicles in case of transportation of wind- blown material like sand

- Implementation of traffic stop/diversion measures including use of safety tape/ barricade/ caution board/ diversion board at working sites with proper diversion sign
- Proper drainage of waste water/ rain water from working sites
- Maintain chance find protocol for archeological objects
- Non use of child labour below 14 yrs age
- Carry out air, noise, water within December 2018 positively. Monitoring photograph needs to be recorded
- Public consultation for linear – pipeline project on regular basis

Health & Safety

- Implement good housekeeping practices at the construction camp, storage area and work site.
- Strictly implement health and safety measures and audit on a regular basis.
- Secure enclosed construction site.
- Provide warning signs of hazardous working areas.
- Clearly demarcate excavations and provide barriers (not just danger tape) to protect pedestrians from open trenches.
- Thoroughly train workers assigned to dangerous equipment.
- Undertake waste management practices.
- Control speed and movement of construction vehicles
- Use of equipment, vehicle with back alarm and placement of flag man
- Exclude public from the site
- Ensure all workers are provided with and use Personal Protective Equipment-helmet, gumboot, safety shoes, goggles, hand gloves, safety belt, nose mask, ear plugs, body harness
- Ensure the visibility of workers through their use of high visibility vests when working in or walking through heavy equipment operating areas
- Document showing tie up of construction agency with local doctor/nursing home/hospital
- Medical examination report of workmen every six month
- Provide medical insurance coverage for workers.
- Display of Safety Officers' name and telephone number at work sites
- Provide clean eating areas where workers are not exposed to hazardous or noxious substances;
- Storage/ disposal of hazardous waste as per Hazardous waste rules
- Storage and disposal of hazardous chemical containers as per National rule.
- Display of MSDS at storage location
- Provide warning signs of hazardous working areas.
- Awareness program on HIV/AIDS

Attendance – Training program AUIIP

Assam Urban Infrastructure Investment Program
 Environment and Safety – Review Meeting & Training Program
 Venue: AUIIP Conference hall, Guwahati
 Date: 12.12.2018 at 2 00 PM

Name	Organization / Designation	Contact No./ E mail	Signature
Deena Boraiah	Environmental Safeguard, PMU, AUIIP	97110-99413 deena.0112@gmail.com	Deena Boraiah
Rohit Sang	Site Engineer, TCP		Rohit
D. B. Saha	Safety officer	910133140 (chaman TCP@gmail.com) 0674611396@mail.com	D. B. Saha
Bhuvanath Pratap Pahi	Safety officer	910 11 55477 bhuvanath.pfoti@gmail.com	Bhuvanath Pratap Pahi

Ardhendu Mitra
 Environment sp1
 DMSC

Assam Urban Infrastructure Investment Program

Environment and Safety – Review Meeting & Training Program

Venue: AUIIP PIU DMSC office, Dibrugarh

Date: 15.12.2018, 10 30 AM

Sr. No.	Name	Organization / Designation	Contact No./ E mail	Signature
1	Meezabhi Baruah	Safeguard & Compliance officer, PIU, AUIIP	9864232004 baruah.meezabhi@gmail.com	
2	Koushik Das	Sr. Engineer	8724991585 Koushikd743@gmail.com	
3	Smiti Das	Safety and Environment Engineer	7002266708 smitidho72@gmail.com	
4	Khinad Phukan	Safety & Environment Engineer	9706140009 khinad02@gmail.com	
5				
6				
7				

Arghendu Mitor
Environment Spl
DMSC

Appendix 13: Labour License and Affidavit from contractor for non requirement of Labour License

Package: AUIP/PR-1/GUW/WS/01 - M/s Tirupati Cement Products (Guwahati)



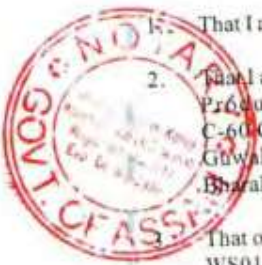
BEFORE THE NOTARY :: KAMRUP (METRO) :: AT GUWAHATI

21 AUG 2017

A F F I D A V I T

I, **CHAMAN ANSARI**, aged about - 40 years, son of Md. Makbul, resident of C-60, Community Centre, Janakpuri, New Delhi - 110058, Presently residing at Dona Presidency, Sixmile, VIP Road, Guwahati - 781022, P.S. - Dispur, in the district of Kamrup (Metro), Assam do hereby solemnly affirm and declare as follows :

Chaman
(CHAMAN ANSARI)



1. That I am a citizen of India by birth and a resident of the aforesaid locality.
 2. That I am the Project Manager (Authorised Signatory) of "Tirupati Cement Products", Govt. Contractor & Builder, Head Office at C-60 Community Centre, Janakpuri, New Delhi and Branch Office at Guwahati, P.N.C. Office No. 5, Vishnu Market, Bharalumukh, P.S. - Bharalumukh, Guwahati, in the district of Kamrup (Metro), Assam.
- That our said firm has entered into a contract being No. AUIP/PRI/GUW/WS01 with Government of Assam.
4. That we are going to engage less than 20 workers for the said work.

Contd.....

NOTARY
KAMRUP (METRO) GUWAHATI
Regd. No. Kam-17
21 AUG 2017



- 2 -

खजम असम ASSAM

5. That this affidavit shall be used as a piece of documentary evidence in support of my statement made above and the same shall be produced before the concern authority as and when required. 22AA 643216
6. That all the statements made in this affidavit are true to the best of my knowledge and belief.

OATH

"I swear that this my declaration is true, that it conceals nothing, and that no part of it is false, so help me God."
And I sign this affidavit on this 21st day of AUGUST, 2017 at Guwahati.

Identified by me

[Signature]
Advocate, Guwahati.

[Signature]
CHAMAN ANSARI
DEPONENT

Solemnly affirmed and declared before me by the deponent who is identified by **Jonab Ali Ahmed**, Advocate, Guwahati on this 21st day of **AUGUST, 2017** at Guwahati.



[Signature]
NOTARY :: GUWAHATI
Kamruj Anand Guwahati
Road No. 44-17

21 AUG 2017

BOOK No-52

FORM VI
[See rule 25 (1)]

STOP CHILD LABOUR
EMPLOYMENT OF CHILD LABOUR
IS A CRIME AGAINST SOCIETY

Government of Assam
Office of the Assistant Labour Commissioner - Cum
Licensing officer, Ulubari, Guwahati - 781007

S.L./Licence No. 7989 Date 05-05-2017 Fee paid Rs 50.00

LICENCE


1. Licence is hereby granted to M/S Shivam Transcon Private Limi-
59, Zoo-Nakengji Road, Geetanagar Guwahati-21 under section 12 (1) of the (02)
Contract Labour (Regulation and Abolition) Act, 1970, subject to the Condition Specified in Annexure.

2. This licence is for doing the work of Construction
(nature of work to be indicate)

in the establishment of Project Director, Assam Urban Infrastructure
(Name of the principal employer to be indicated) Investment Program (AUII)

at Guwahati-5 (Place of work to be indicated)

3. The licence shall remain in force till 04-05-2018 (date to be indicated)



Date 05-05-2017

[Signature]
Signature and Seal of the Licensing Officer.
Under the Contract Labour (R & A) Act, 1970
Ulubari, Guwahati-7

RENEWALS [rule 29]

	Date of renewal	Fee paid for renewal	Date of expiry
1.	<u>22-6-2018</u>	<u>275.00</u>	<u>04-05-2019</u>
2.			
3.			
4.			
5.			

[Signature]
Licensing Officer
Under Contract Labour (R & A) Act, 1970
Ulubari, Guwahati


Date _____ Signature and Seal of the Licensing Officer _____

Package: AUIP/PR-1/DIB/SWM-01B - M/s Milan Dutta- Blackberry Overseas Pvt.Ltd.- Alfa-Thermaltd.(Jv) (Dibrugarh)

FORM VI
[See rule 25 (1)]

STOP CHILD LABOUR
Employment of Children Act, 1947

Government of Assam
Office of the Labour Commissioner, Assam
Gopinath Nagar, Guwahati - 781016



Sl. No. 2490
 Licence No. CLL(A/Mam) Date 02/02/2018 Fee paid Rs 60/-
01/2018/2490

LICENCE

1. Licence is hereby granted to SRI MILAN DUTTA
S/o S. Bhageswar Datta, Uzanbazar, H.No-42, Guwahati-3 under
 section 12 (1) of the Contract Labour (Regulation and Abolition) Act, 1970, subject to the condition
 specified in Annexure.

2. This licence is for doing the work of Contract and Supply
 (nature of work to be indicated)
 in the establishment of Chief Engineer, P.W.D. (Roads)
 (name of the principal employer to be indicated)
 at All Assam (place of work to be indicated)

3. The licence shall remain in force till 01/02/2019 (date to be indicated)

Date 02-02-2018 Signature and Seal of the Licensing Officer
[Signature]
 Licensing Officer, Assam
 Guwahati-18.

RENEWALS [rule 29]

Sl No.	Date of renewal	Fee paid for renewal	Date of expiry	Signature and seal of the Licensing Officer, Assam
1.				
2.				
3.				
4.				
5.				
6.				
7.				

Package: AUHIP/PR-1/DIB/SWM-01A - M/s Badri Rai & Co (Dibrugarh)

FORM - VI
(See Rule 25(1))



GOVERNMENT OF ASSAM
OFFICE OF THE LICENSING OFFICER ::::DIBRUGARH (ASSAM)

License NO. CLU/D/ 8-257

Fee Paid Rs. 57.00
Dated 9-3-18

LICENCE

License is hereby granted to: M/s Badri Rai and Company, Pant-Sui Assam Kr. Rai and Sri Ajay Kr. Rai, Station Road, Daluajan, Dist. Dibrugarh

Under Section 12(1) of Contract Labour (regulation and Abolition) Act, 1970 subject to the condition specified in Annexure.

1. This Licence is for doing the work of Construction and Repairing works in the establishment of

at Abtl. Program Manager, P.H. DWIP, Dibrugarh

2. This licence shall remain in force till 8-3-2019

Date: 9/3/18

[Signature]
Signature & Seal of the
Licensing Officer, Dibrugarh

RENEWAL
(See Rule 29)

Date of Renewal	Fee paid of renewal	Date of Expiry	Signature of Licensing Officer

Overleaf

Signature & Seal of the
Licensing Officer, Dibrugarh

Appendix 14: Medical Examination report for workers

Package: AUIP/PR-1/GUW/WS/01 - M/s Tirupati Cement Products (Guwahati)

MEDICAL EXAMINATION REPORT
(PERIODICAL/PREEMPLOYMENT MEDICAL EXAMINATION)

1. Name of the project: Construction of Water Supply Transmission Main Pipelines and Allied Works in Guwahati.

2. Name of the factory/contractor agency : M/S Tirupati Cement Products

3. Name of the employee: Ramond yadav

4. Age of the employee: 42

5. Identification Mark: cut mark on left hand

6. Nature of job (Designation & department): Store keeper

7. Date of the employment: May 2017

8. Length of the services in years: 14 months

9. General Survey : Health : Good/Fair/Poor
Height: 167 c.m.
Weight: 69 kg

10. Blood Group : B+ve

11. Eye Vision : Normal 6/6
Use of glass : no

12. Hearing : Normal/Abnormal

14. Cardiovascular System : Pulse 72/min
: B.P. 124/82 mmHg
: Heart Sound good (normal)
: Remarks if any N

18. Skin Condition : Normal/Abnormal
: Remarks on any skin disease noticed N

20. Hydrocele : Present/Absent.

21. Present complains if any : N

22. Summary of Findings : Heart disease N
: Hypertension N
: Diabetes N

23. Recommendation if any for any further investigation:- N

24. Comments/ Medical advice if any:

[Signature]
Signature of the employees

[Signature]
Signature of the medical officer
Dr. J. K. Kalia
M.B.B.S.
Regd. No. 2153 (AMC)
Senior Physician

Package: AUIP/PR-1/GUW/WS/02A & 02B - M/S Shivam Transcon Pvt Ltd (Guwahati)

MEDICAL EXAMINATION REPORT
(PERIODICAL/PREEMPLOYMENT MEDICAL EXAMINATION)

1. Name of the project: Construction of water storage reservoir at Gopalnagar/Kenduguri/North Jyoti Nagar ✓
2. Name of the factory/contractor agency: Shivam Transcon Pvt. Ltd.
3. Name of the employee: Sarbesh Ali
4. Employee Father Name: Hasmat Ali
5. Age of the employee: 27 years
6. Identification Mark: 1 black mole on the left side of cheek.
7. Nature of job (Designation & department): Misto
8. Date of the employment:
9. Length of the services in years:

10. General Survey : Health : Good/Fair/Poor ✓
Height : 5" c.m.
Weight: 48 k.g.

11. Blood Group : B-VE

12. Eye Vision : R Normal, Normal

13. Use of glass : No

14. Hearing : Normal/Abnormal ✓

15. Cardiovascular System : Pulse 70/m.
: B.P. 110/70 mmHg
: Heart Sound Normal
: Remarks if any

16. Skin Condition : Normal/Abnormal ✓
: Remarks on any skin disease noticed NO

17. Hydrocele : Present/Absent. ✓

18. Present complains if any : Indigestion & mucous stool.

19. Summary of Findings : Heart disease Normal ✓
: Hypertension Normal ✓
: Diabetes NO (RBS= 107 mg/ 01)

20. Recommendation if any for any further investigation: -

21. Comments/ Medical advice if any:

Signature of the employees
Sarbesh Ali

Signature of the medical officer
Resident Medical Officer
Govt. Ayur Hospital
Jalukbari-74

To whom it may concern -

Certified that a free Primary Health
Check up was conducted at the site office
campus for workers and staff engaged at
SWMPT Project on 29/12/18 by
Dr. Ranjan Baruah & his staffs.

All total 46 personnel were checked
up and prescribed necessary treatment and
investigations and declared closed after all
were examined, while checked up the
health and team also awarded. No
any ill effect of HIV personnel seen.

1
Baruah
29/12/18
Dr. Ranjan Baruah
M BHO (D)
Namanji Barpathar MPH
Dibrugarh

Preliminary Health checkup Camp and HIV/AIDS Awareness Program in Sided

Location: Loka Ghanomama Kibrayant

Sl. No	Name of staff/Labor	Address with Position	Remarks
1.	Parkane Aji	Labaun Leader Swan Project, Dikrayant	BP 120/80 PR - 80/min CNS CNS Rmp CIT
2.	Md Abu Taha (19 y/m)		BP 110/70 PR 80/min CNS CNS Rmp CIT
3.	Md. Husaini (19 y/m)		BP 110/70 PR 80/min CNS CNS Rmp CIT
4.	Md. Raju Mia (17 y/m)		BP 110/70 PR 80/min CNS CNS Rmp CIT
5.	Abdul Saik (17 y/m)		BP 110/70 PR 80/min CNS CNS Rmp CIT
6.	Mohamed Islam (18 y/m)		BP 110/70 PR 80/min CNS CNS Rmp CIT
7.	Sabid Ali (19 y/m)		BP 110/70 PR 80/min CNS CNS Rmp CIT
8.	Amin Uddin (18 y/m)		BP 110/70 PR 80/min CNS CNS Rmp CIT
9.	Sabidul Islam (18 y/m)		BP 110/70 PR 80/min CNS CNS Rmp CIT
10.	Masud Hossain (18 y/m)		BP 110/70 PR 80/min CNS CNS Rmp CIT

40) Faridul Hogue

BP 120/80 mmHg CNS
PR 92/min CVS / WNL
RUP
CIS

41) Kgo Uddu Seko

BP 110/70 mmHg CNS
PR 62/min CVS / WNL
RUP
CIS

42) Kipit dedden

BP 120/80 mmHg CNS
PR 83 CVS / W
RUP
CIS

43) Md. Rostan Ali

BP 110/70 mmHg CNS
PR 95 RUP / WNL
CIS

44) Jabir Isah

BP 120/80 mmHg CNS
PR 80 CVS / WNL
RUP
CIS

45) Idris Isah

BP 130/90 mmHg CNS
PR 73 CVS / WNL

46) Kuba Isah

47)

Abbas
27/07/18
D. Ranjan Bonnah
M&H(U)
Nandini Barpalle MPH
Di brugank

Appendix 15: HIV/AIDS Awareness Program

Package: AUHIP/PR-1/GUW/WS/02A & 02B - M/S Shivam Transcon Pvt Ltd (Guwahati)



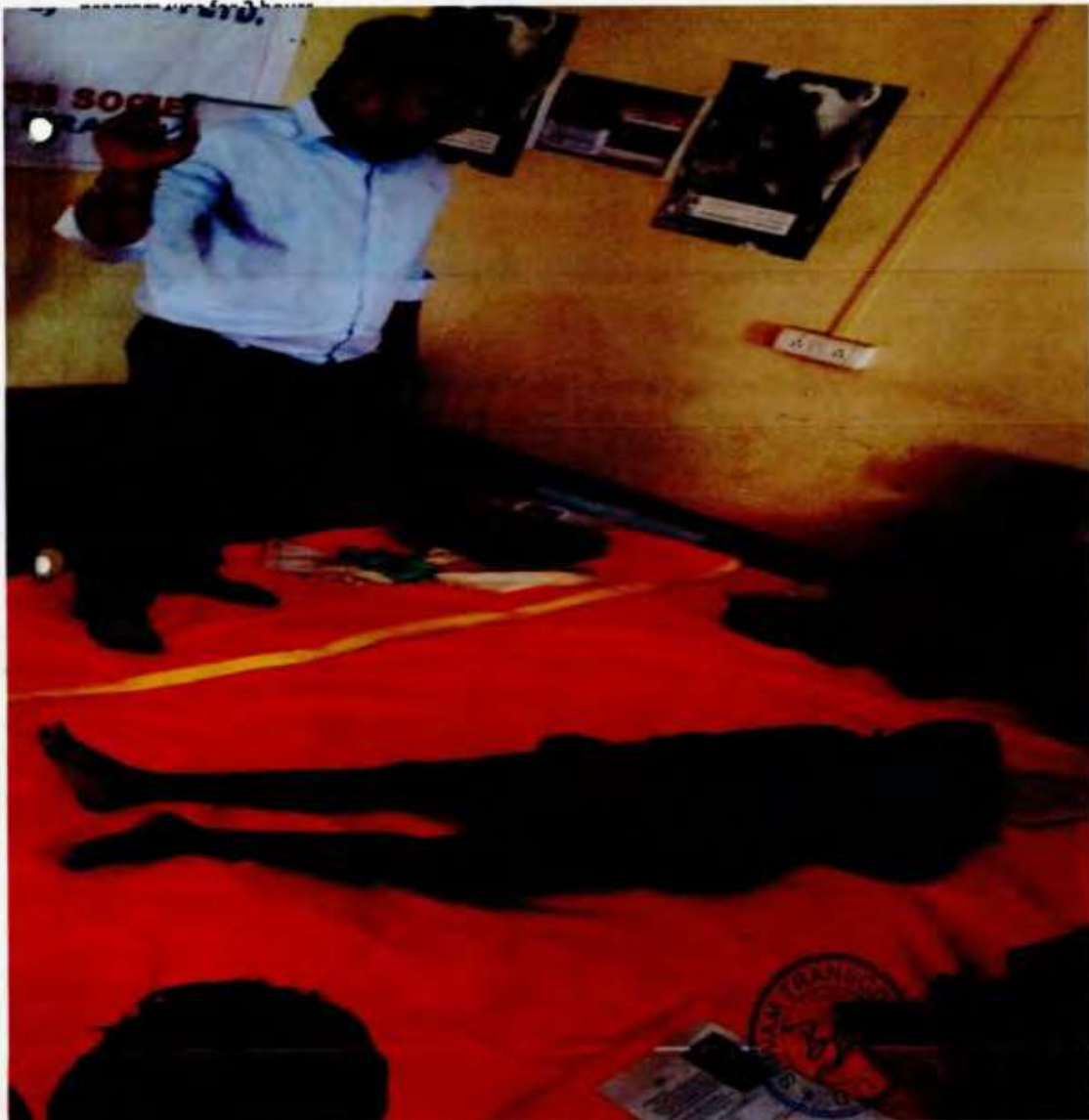
Name of Project: Construction of clear Water Reservoir work in Gopalnagar, North Jyotinagar and Kenduguri Guwahati Assam.

1. Purpose:

- The proposed of the program was to educate the labour about causes and prevention methods of HIV infection and AIDS.
- The proposed of the program was to educate the labour about causes of First Aid (General) Training required by site supervisor, Drivers and Labour.
-

2. Time and Venue:

The program was organized on 30th December 2018, at our site office. The duration of the



3. Trainer:

The trainer was provided by INDIAN RED CROSS SOCIETY ASSAM STATE BRANCH.



4. Trainees:

All the personal of Shivam Transcon Pvt.Ltd. including Supervisor, Drivers, Operators and labour were present in the training session. A total of 35 trainees were present.



Appendix 16: Sample First Aid Record

		Page No. : _____		Date : _____	
Date	Description	Name of Person	Action taken	Sign	Remarks
26/07/18	Small cut in left hand	Pawan Datta	Applied first aid treatment		
7/08/18	Small cut in old finger	Rajiv Nanda	Applied first aid treatment		
29/08/18	Minor cut in right leg	Nanda Kumar	Applied first aid treatment		
04/09/18	cut in right ring finger	Chitra Gopi	Applied first aid treatment		
10/09/18	cut in left hand	Rahul Nanda	Applied first aid treatment		
21/09/18	Small cut in left hand	Raman Dasi	Applied first aid treatment		
24/09/18	cut in right little finger	Jitendra Sonant	First aid treatment has Applied		
16/10/18	cut in left leg	Punjab Kumar	Applied first aid treatment		
20/11/18	Minor cut in left hand	Manoj Chatter	Applied first aid treatment		
27/11/18	Small cut in right little finger	Deepak Gopi	Applied first aid treatment		

Appendix 17: Water Quality data in and around SWM project site

Month of July 2018



ENVIRONMENTAL PARAMETERS

Regd No.171313 100/340 (11) (Certified by PCB, Govt. of Assam)
Narikoilbari, Near Goataragar Police Station, Guwahati-24, Assam

Report No: EP/EXT/RW/18-19-28
Date: 9th 2018

For: Project Site of M/S Milar Dutta Blackberry Overseas Pvt. Ltd & Alfa Therm Ltd. (JV), Dibrugarh, Assam

RAW WATER ANALYSIS REPORT

S. No.	Parameters	Results	Units	Desirable Limits (IS:10500:2012)
1	Colour (Pt. Scale Hz Units)	<2	Hazen Units	Max 5
2	Odour	Odourless	-	Unobjectionable
3	Taste	Agreeable	-	Agreeable
4	Turbidity	0.65	NTU	Max 1.0
5	pH	6.9	-	6.5-8.5
6	Temperature	34.0	°C	-
7	Total Alkalinity as CaCO ₃	122	mg/L	Max. 200
8	Total Dissolved Solids	180	mg/L	Max. 500
9	Total Hardness as CaCO ₃	65	mg/L	Max. 500
10	Chlorides as Cl ⁻	87	mg/L	Max. 250
11	Residual free Chlorine	NT	mg/L	Min 0.2
12	Sulphates as SO ₄	28	mg/L	Max. 200
13	Fluoride as F ⁻	0.034	mg/L	Max. 1.0
14	Nitrates as NO ₃	0.082	mg/L	Max. 45
15	Dissolved Iron as Fe	0.42	mg/L	Max. 0.30
16	Total Arsenic as As	NT	mg/L	Max. 0.01
17	Copper as Cu	NT	mg/L	Max. 0.05
18	Lead	NT	mg/L	Max. 0.01
19	Boron	NT	mg/L	Max. 0.05

NT: Not Traceable

Sample Source: Tube-Well Collection Date: 10th 18

Analysis Protocol: IS:3025

Collected by: Client and Environmental Parameters


Checked by: S.S. Barua



Report No: EP/EXT/SW/18-19/24
 Date: 9.7.2018

For : Project Site of M/S Milan Dutta Blackberry Overseas Pvt. Ltd & Alfa Therm Ltd. (JV), Dibrugarh, Assam

SURFACE WATER ANALYSIS REPORT

Sl. No.	Parameters	Results	Units	Desirable Limits (IS:10500:2012)
1	Colour (Pt. Scale Hz Units)	<5	Hazen Units	Max 5
2	Odour	Odourless	-	Unobjectionable
3	Taste	agreeable	-	Agreeable
4	Turbidity	0.61	NTU	Max 1.0
5	pH	7.1	-	6.5-8.5
6	Temperature	32.7	°C	-
7	Total Alkalinity (as CaCO ₃)	47	mg/L	Max. 200
8	Total Dissolved Solids	189	mg/L	Max. 500
9	Total Hardness as CaCO ₃	27	mg/L	Max. 200
10	Chlorides as Cl	1.9	mg/L	Max. 250
11	Residual free Chlorine	NT	mg/L	Min 0.2
12	Sulphates as SO ₄	21	mg/L	Max. 200
13	Fluoride as F	NT	mg/L	Max. 1.0
14	Nitrates as NO ₃	NT	mg/L	Max. 45
15	Dissolved Iron as Fe	0.053	mg/L	Max.0.30
16	Total Arsenic (as As)	NT	mg/L	Max.0.01
17	Copper as Cu	NT	mg/L	Max. 0.05
18	Lead	NT	mg/L	Max. 0.01
19	Boron	NT	mg/L	Max.0.05

NT: Not Traceable
 Sample Source : Sessa river Collection Date: 7/07/18
 Analysis Protocol: IS3025
 Collected by: Client and Environmental Parameters

Siddh
 Checked by S.S. Baruah

Month of August 2018



ENVIRONMENTAL PARAMETERS

Regd No.171313 100/340 (11) (Certified by PCB, Govt. of Assam)
Narikelbari, Near Geetanagar Police Station, Guwahati-24, Assam

Report No: EP/EXT/RW/18-19/28
Date: 8.8.2018

For: Project Site of M/S Milan Dutta Blackberry Overseas Pvt. Ltd & Alfa Therm Ltd. (JV), Dibrugarh,
Assam

RAW WATER ANALYSIS REPORT

Sl. No.	Parameters	Results	Units	Desirable Limits (IS:10500:2012)
1	Colour (Pt. Scale Hz Units)	<2	Hazen Units	Max 5
2	Odour	Odourless	-	Unobjectionable
3	Taste	agreeable	-	Agreeable
4	Turbidity	0.63	NTU	Max 1.0
5	pH	7.1	-	6.5-8.5
6	Temperature	34.6	°C	-
7	Total Alkalinity (as CaCO ₃)	145	mg/L	Max. 200
8	Total Dissolved Solids	156	mg/L	Max. 500
9	Total Hardness as CaCO ₃	63	mg/L	Max. 200
10	Chlorides as Cl	8.6	mg/L	Max. 250
11	Residual free Chlorine	NT	mg/L	Min 0.2
12	Sulphates as SO ₄	29	mg/L	Max. 200
13	Fluoride as F	0.036	mg/L	Max. 1.0
14	Nitrates as NO ₃	0.089	mg/L	Max. 45
15	Dissolved Iron as Fe	0.46	mg/L	Max. 0.30
16	Total Arsenic (as As)	NT	mg/L	Max. 0.01
17	Copper as Cu	NT	mg/L	Max. 0.05
18	Lead	NT	mg/L	Max. 0.01
19	Boron	NT	mg/L	Max. 0.05

NT: Not Traceable

Sample Source: Tube-Well Collection Date: 8.08.18

Analysis Protocol: IS3025

Collected by: Client and Environmental Parameters


Checked by: S.S. Baruah



ENVIRONMENTAL PARAMETERS

Regd No 171313 100/340 (11) (Certified by PCB, Govt. of Assam)
Narikolbari, Near Gestanagar Police Station, Guwahati-24, Assam

Report No: EP/EXT/SW/18-19/28
Date: 8.8.2018

For: Project Site of M/S Milan Dutta Blackberry Overseas Pvt. Ltd & Alfa Therm Ltd. (JV), Dibrugarh, Assam

SURFACE WATER ANALYSIS REPORT

Sl. No.	Parameters	Results	Units	Desirable Limits (IS:10500:2012)
1	Colour (Pt. Scale Hz Units)	<3	Hazen Units	Max 5
2	Odour	Odourless	-	Unobjectionable
3	Taste	agreeable	-	Agreeable
4	Turbidity	0.81	NTU	Max 1.0
5	pH	7.2	-	6.5-8.5
6	Temperature	34.5	°C	-
7	Total Alkalinity (as CaCO ₃)	51	mg/L	Max. 200
8	Total Dissolved Solids	186	mg/L	Max. 500
9	Total Hardness as CaCO ₃	26	mg/L	Max. 200
10	Chlorides as Cl	1.8	mg/L	Max. 250
11	Residual free Chlorine	NT	mg/L	Min 0.2
12	Sulphates as SO ₄	21	mg/L	Max. 200
13	Fluoride as F	NT	mg/L	Max. 1.0
14	Nitrates as NO ₃	NT	mg/L	Max. 45
15	Dissolved Iron as Fe	0.062	mg/L	Max 0.30
16	Total Arsenic (as As)	NT	mg/L	Max 0.01
17	Copper as Cu	NT	mg/L	Max 0.05
18	Lead	NT	mg/L	Max 0.05
19	Boron	NT	mg/L	Max 0.05

NT: Not Traceable
Sample Source: Sessa river Collection Date: 7/09/18
Analysis Protocol: IS3025
Collected by: Client and Environmental Parameters

S. S. Baruah
Checked by S.S. Baruah

Month of September 2018



ENVIRONMENTAL PARAMETERS

Regd No.171313 100/340 (11) (Certified by PCB, Govt. of Assam)
Narikelbari, Near Geetanagar Police Station, Guwahati-24, Assam

Report No: EP/EXT/RW/18-19/28
Date: 8.9.2018

For : Project Site of M/S Milan Dutta Blackberry Overseas Pvt. Ltd & Alfa Therm Ltd. (JV), Dibrugarh,
Assam

RAW WATER ANALYSIS REPORT

Sl. No.	Parameters	Results	Units	Desirable Limits (IS:10500:2012)
1	Colour (Pt. Scale Hz Units)	<3	Hazen Units	Max 5
2	Odour	Odourless	-	Unobjectionable
3	Taste	agreeable	-	Agreeable
4	Turbidity	0.64	NTU	Max 1.0
5	pH	7.2	-	6.5-8.5
6	Temperature	34.8	°C	-
7	Total Alkalinity (as CaCO ₃)	132	mg/L	Max. 200
8	Total Dissolved Solids	148	mg/L	Max. 500
9	Total Hardness as CaCO ₃	58	mg/L	Max. 200
10	Chlorides as Cl	7.6	mg/L	Max. 250
11	Residual free Chlorine	NT	mg/L	Min 0.2
12	Sulphates as SO ₄	28	mg/L	Max. 200
13	Sulphates as SO ₄	0.034	mg/L	Max. 1.0
14	Fluoride as F	0.088	mg/L	Max. 45
15	Nitrates as NO ₃	0.41	mg/L	Max. 0.30
16	Dissolved Iron as Fe	0.41	mg/L	Max. 0.01
17	Total Arsenic (as As)	NT	mg/L	Max. 0.05
18	Copper as Cu	NT	mg/L	Max. 0.01
19	Lead	NT	mg/L	Max. 0.01
20	Boron	NT	mg/L	Max. 0.05

NT: Not Traceable
Sample Source: Tube-Well Collection Date: 6/09/18
Analysis Protocol: IS:3025
Collected by: Client and Environmental Parameters


Checked by S.S. Baruah



ENVIRONMENTAL PARAMETERS

Regd No.171313 100/340 (11) (Certified by PCB, Govt. of Assam)
Narikelbari, Near Geetanagar Police Station, Guwahati-24, Assam

Report No: EP/EXT/SW/18-19/35
Date: 8.9.2018

For : Project Site of M/S Milan Dutta Blackberry Overseas Pvt. Ltd & Alfa Therm Ltd. (JV), Dibrugarh, Assam

SURFACE WATER ANALYSIS REPORT

Sl. No.	Parameters	Results	Units	Desirable Limits (IS:10500:2012)
1	Colour (Pt. Scale Hz Units)	<3	Hazen Units	Max 5
2	Odour	Odourless	-	Unobjectionable
3	Taste	agreeable	-	Agreeable
4	Turbidity	0.56	NTU	Max 1.0
5	pH	6.9	-	6.5-8.5
6	Temperature	33.56	°C	-
7	Total Alkalinity (as CaCO ₃)	53	mg/L	Max. 200
8	Total Dissolved Solids	263	mg/L	Max. 500
9	Total Hardness as CaCO ₃	22	mg/L	Max. 200
10	Chlorides as Cl	1.6	mg/L	Max. 250
11	Residual free Chlorine	NT	mg/L	Min 0.2
12	Sulphates as SO ₄	21	mg/L	Max. 200
13	Fluoride as F	NT	mg/L	Max. 1.0
14	Nitrates as NO ₃	NT	mg/L	Max. 45
15	Dissolved Iron as Fe	0.049	mg/L	Max. 0.30
16	Total Arsenic (as As)	NT	mg/L	Max. 0.01
17	Copper as Cu	NT	mg/L	Max. 0.05
18	Lead	NT	mg/L	Max. 0.01
19	Boron	NT	mg/L	Max. 0.05
NT: Not Traceable				
Sample Source : Sessa river Collection Date: 7/08/18				
Analysis Protocol: IS3025				
Collected by: Client and Environmental Parameters				

Siddh
Checked by S.S. Baruah

Month of December 2018



ENVIRONMENTAL PARAMETERS

Regd No. 171313 100/340 (11)
Nankolbar, Near Greetanagar Police Station, Guwahati-24, Assam

Report No: EP/EXT/RW/18-19/02
Date: 9/11/2018

For : Project Site of M/S Milan Dutta Blackberry Overseas Pvt. Ltd & Alfa Therm Ltd. (JV), Dibrugarh, Assam

RAW WATER ANALYSIS REPORT

Sl. No.	Parameters	Results	Units	Desirable Limits (IS:10500:2012)
1	Colour (Pt. Scale Hz Units)	<2	Hazen Units	Max 5
2	Odour	Odourless	-	Unobjectionable
3	Taste	agreeable	-	Agreeable
4	Turbidity	0.59	NTU	Max 1.0
5	pH	6.9	-	6.5-8.5
6	Temperature	17.5	°C	-
7	Total Alkalinity (as CaCO ₃)	119	mg/L	Max. 200
8	Total Dissolved Solids	151	mg/L	Max. 500
9	Total Hardness as CaCO ₃	72	mg/L	Max. 200
10	Chlorides as Cl	8.3	mg/L	Max. 250
11	Residual free Chlorine	NT	mg/L	Min 0.2
12	Sulphates as SO ₄	31	mg/L	Max. 200
13	Fluoride as F	0.029	mg/L	Max. 1.0
14	Nitrates as NO ₃	0.078	mg/L	Max. 45
15	Dissolved Iron as Fe	0.21	mg/L	Max 0.30
16	Total Arsenic (as As)	NT	mg/L	Max 0.01
17	Copper as Cu	NT	mg/L	Max. 0.05
18	Lead	NT	mg/L	Max. 0.01
19	Baron	NT	mg/L	Max. 0.05

NT: Not Traceable
Sample Source : Tube-Well Collection Date: 02/11/18
Analysis Protocol: IS 3025
Collected by: Client and Environmental Parameters


Checked by S.S. Baruah

E-mail: envassam@gmail.com

Mobile No 8011005964



Report No: L-34/S.P/W/16-1901
Date: 8/22/2018

For: Directorate of MSMEs, Small Industries, Government of Kerala, Aluva, Thiruvananthapuram, Kerala

SURFACE WATER ANALYSIS REPORT

Sr. No.	Parameters	Results	Units	Desirable Limits (IS:11500:2012)
1	pH value (N Scale H ₂ O Unit)	~7	Dimensionless	Max 7
2	Color	Unmeasurable	Color	Unobtrusive
3	Taste	Unmeasurable	-	Unobtrusive
4	Turbidity	Unmeasurable	-	Unobtrusive
5	DO	0.60	mg/L	Min 1.0
6	Temperature	27.1	°C	15-20°C
7	Total Solids (as CaCO ₃)	48	mg/L	-
8	Total Dissolved Solids	157	mg/L	Max 500
9	Total Hardness (as CaCO ₃)	172	mg/L	Max 500
10	Chloride (as Cl ⁻)	1.8	mg/L	Max 200
11	Residual Free Chlorine	N/A	mg/L	Max 2.0
12	Sulphate (as SO ₄)	18	mg/L	Min 0.2
13	Fluoride (as F ⁻)	0.07	mg/L	Min 0.50
14	Nitrate (as NO ₃)	0.1	mg/L	Min 1.0
15	Dissolved Iron (Fe)	0.002	mg/L	Max 0.5
16	Total Arsenic (as As)	0.01	mg/L	Max 0.1
17	Cadmium (as Cd)	0.01	mg/L	Max 0.01
18	Lead	0.01	mg/L	Max 0.05
19	Boron	0.01	mg/L	Max 0.50
20	Copper	0.01	mg/L	Max 0.05

Sample Source: Sree Narayana Collection Date: 06/22/18
Analysis Period: 06/23/18
Collected by: Chem and Environmental Parameter

Checked by: S. K. Thampi

Appendix 18: Public consultation & Awareness


A. Consultation at Guwahati

Public consultation during construction:-

Package No:- AUJIP/PR-1/GUW/WS/02A/GOPALNAGAR

Area/Location

S.No.	Date	PHE connection Restoration (In case affected remarks)	Overburden soil removal remarks	Road restoration remarks	Dust and Noise Problem remarks	Social safety arrangement caution tape/Barricade etc.by contractor remarks	Problem of local movement due to project activity remarks	Other problem faced if any	Name of the person with address/contact number	Signature
1	25/7/18	No	No	No	No	Done Properly	No	No	Haripriya Baishya Gopal Nagar No 6102/15/3	Haripriya Baishya
2	25/7/18	No	No	No	No	Done Properly	No	No	Haripriya Baishya Gopal Nagar No 6102/15/3	Haripriya Baishya
3	25/7/18	No	No	No	No	Done Properly	No	No	Himani Seka Gopal Nagar No 755/15/1A	Himani Seka
4	25/7/18	No	No	No	No	Done Properly	No	No	Hansen Haloi Gopal Nagar No 575/2805	Hansen Haloi
5	25/7/18	No	No	No	No	Done Properly	No	No	Jaya Rabha Gopal Nagar	J.R.
6										
7										
8										
9										
10										
11										
12										



(Consultation by Reservoir contractor)

TRANSMISSION MAIN PIPELINES								
UNDER PACKAGE ADB/AUIIP/PR-1/GUW/WS-01 OF TRANCHE - I, AUIIP								
Date	Location	No. of Participants				Status of Participants	Topic Discussed	Issues Raised
		Male	Female	% of Female	Total			
22/10/2018	Chachal VIP Road	09	01	7.14	15	Business, Labour, Private service Mystery	<ol style="list-style-type: none"> 1. Construction of Transmission Main Pipelines. 2. Adequate Safety measures adopted to ensure safety. 	<ol style="list-style-type: none"> 1. Local people emerged satisfied for laying of pipelines as it would benefit the people for getting safe drinking water. 2. People expecting supply of water as early as possible as it is a huge crises situation in their areas. 3. Local people were very happy that adequate safety measures were adopted for safety of the people.

Khawin Raishya

Khawin Raishya

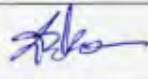

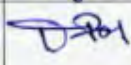
ATTENDENCE SHEET FOR PUBLIC CONSULTATION
ASSAM URBAN INFRASTRUCTURE INVESTMENT PROGRAM (AUIIP)
WATER SUPPLY PROJECT SOUTH EAST GUWAHATI FUNDED BY ADB

Name of the Sub-Project: Construction of Transmission Main pipelines and allied works in South East Guwahati.

District: Kamrup (M) Date: 22.10.2018 Time: 2:00 PM

Venue/Area: Chackal, VIP Road

Total Participation: 10 Male: 9 Female: 1

Sl No	Name	Sex (M/F)	Occupation	Social Category 1. SC 2. ST 3. OBC 4. Gen 5. Other	Signature
1	Babul Deka	M	Site Supervisor	OBC	
2	Sahajant Sirdar	M	Mykery	G	Sahajant
3	Bajaluddin	M	Shop	G	Bajaluddin
4	Baharul	M	Labour	G	Baharul
5	Bipin Kumar	M	Business	G	
6	Sanjiv Murda	M	Private Service	OBC	Sanjiv
7	U.B. Yadav	M	S.O.	G	U.B. Yadav
8	Dipak Das	M	Private Service	SC	
9	Khairun Raishya	M	Resident Spl. PMU	G	Khairun Raishya
10	Deena Baruah	F	Environment Specialist, PMU	G	Deena Baruah

ATTENDANCE SHEET FOR PUBLIC CONSULTATION
ASSAM URBAN INFRASTRUCTURE INVESTMENT PROGRAM (AUIIP)
WATER SUPPLY PROJECT SOUTH EAST GUWAHATI FUNDED BY ADB

Name of the Sub-Project: Construction of Transmission Main pipelines and allied works in South East Guwahati.

District: Kamrup (M) Date: 21-12-2018 Time: 3:00 PM

Venue/Area: Basistha Mandir Office

Total Participation: 24 Male: 17 Female: 7

Sl No	Name	Sex (M/F)	Occupation	Signature
1	Ranjit Konwar	M	ADC, Kamrup Metropolitan Dist.	
2	B. Bhaskar Das	M	Circle Officer Basistha	
3	অসীম কলিতা	M	BDPS, Moulou	
4	শ্রী (সিবিআই) (সিবিআই) - M	M	u	
5	শ্রী গণেশ শর্মা	M	u	
6	K. Shek Md Muner	M	Water Supply Network Specialist	
7	Bhasat Das.	M.	Service - AUIIP Proj. Engg.	
8	Judul Pa	M	Scoutman	
9	Ajit Kakate.	M.	Business.	
10	Dimbhuras Das.	M.	Business	
11	Shyamal K. Dey.	M	Business -	

ATTENDENCE SHEET FOR PUBLIC CONSULTATION
ASSAM URBAN INFRASTRUCTURE INVESTMENT PROGRAM (AUIIP)
WATER SUPPLY PROJECT SOUTH EAST GUWAHATI FUNDED BY ADB

Name of the Sub-Project: Construction of Transmission Main pipelines and allied works in South East Guwahati.

District: Kamrup (M) Date: 21.12.2018 Time: 3.00 PM

Venue/Area: Basistha Mandir office

Total Participation: 24 Male: 17 Female: 7

Sl No	Name	Sex (M/F)	Occupation	Signature
12	<u>Chobanawor Kowati</u>	<u>(M)</u>	<u>Bank Nagan Duisinoh.</u>	<u>B.Kowati</u>
13	<u>উপাচারী</u>	<u>M</u>	<u>ডায়াল</u>	<u>উপাচারী</u>
14	<u>সী মিনতি দেবি</u>	<u>F</u>	<u>পাইচ</u>	<u>Basistha</u>
15	<u>Sri PamySari Devi</u>	<u>F</u>	<u>পাইচ Pamso Bitnah</u>	<u>Basistha</u>
16	<u>Sri Pannama Maraj</u>	<u>F</u>	<u>পাইচ</u>	<u>Basistha</u>
17	<u>Sri Moyu Basika</u>	<u>F</u>	<u>পাইচ</u>	<u>Basistha</u>
18	<u>Sri minati chabong</u>	<u>F</u>	<u>পাইচ</u>	<u>Basistha</u>
19	<u>Rupa Boko Ray</u>	<u>F</u>	<u>,</u>	<u>,</u>
20	<u>সী মিনতি দেবি</u>	<u>F</u>	<u>,</u>	<u>,</u>
21	<u>Amiya Sarma</u>	<u>M</u>	<u>See Basistha Mandir</u>	<u>Amiya</u>
22	<u>Khanin Barikha</u>	<u>M</u>	<u>Responsible Spl. AUIIP</u>	<u>Khanin Barikha</u>

ATTENDANCE SHEET FOR PUBLIC CONSULTATION
ASSAM URBAN INFRASTRUCTURE INVESTMENT PROGRAM (AUIIP)
WATER SUPPLY PROJECT SOUTH EAST GUWAHATI FUNDED BY ADB

Name of the Sub-Project: Construction of Transmission Main pipelines and allied works in South East Guwahati.

District: Kamrup (M) Date: 21.12.2018 Time: 1:00 PM

Venue/Area: Rasisha Mandir office

Total Participation: 24 Male: 17 Female: 7

Sl No	Name	Sex (M/F)	Occupation	Signature
23	Ranta Bordoloi	M	Assistant project Engineer	
24	Sanjib Barshya	M	Member of BODS	



ATTENDANCE SHEET FOR PUBLIC CONSULTATION
ASSAM URBAN INFRASTRUCTURE INVESTMENT PROGRAM (AUIIP)
WATER SUPPLY PROJECT SOUTH EAST GUWAHATI FUNDED BY ADB

Name of the Sub-Project: Construction of Transmission Mains pipelines and allied works in South East Guwahati.

District: Kamrup (M) Date: 10/07/2018 Time: 11:30 AM

Venue/Area: Basialha Charid'

Total Participation: 15 Male: 14 Female: 1

Sl No	Name	Sex (M/F)	Occupation	Social Category 1. SC 2. ST 3. OBC 4. Gen 5. Other	Signature
1	S. Hussain	M	Business	Gen	S. Hussain
2	Pabinal Lakshari	M	Business	Gen	P. Sonban
3	Jogesh Rai	M	"	Gen	Jogesh Rai
4	Ajay	M	"	Gen	Ajay
5	Subhash Jaru		"	Gen	
6	Sanjiv Kumar		"	SC	
7	G. Banik		"	SC	G. Banik
8	Sobdal Khzi'		Mechanic	Gen	
10	Suman Mandal		Business	SC	Suman Mandal
11	Gorang Yadav		Labour.	Gen	G. Yadav
12	Sunil Mandal		Labour	SC	Sunil Mandal

ATTENDANCE SHEET FOR PUBLIC CONSULTATION
ASSAM URBAN INFRASTRUCTURE INVESTMENT PROGRAM (AUIP)
 WATER SUPPLY PROJECT SOUTH EAST GUWAHATI FUNDED BY ADB

Name of the Sub-Project: Construction of Transmission Main pipelines and allied works in South East Guwahati.

District: Kamrup (M) Date: 10/07/18 Time: 11:30 AM

Venue/Area: Basistha Chariali

Total Participation: 15 Male: 14 Female: 1

Sl No	Name	Sex (M/F)	Occupation	Social Category 1. SC 2. ST 3. OBC 4. Gen 5. Other	Signature
13	U. B. Yadav	M	SO.	Gen	<i>U. B. Yadav</i>
14	Khawin Baisiya	M	Resident Spt, PIU	Gen	<i>Khawin Baisiya</i>
15	Deena Baruah	F	Environmental Safeguard, PIU	General	<i>Deena Baruah</i>
*					



Public consultation at Basistha Chariali



Public consultation at Basistha Chariali



Public consultation at Chachal



Public consultation at Chachal

B. Consultation at Dibrugarh

COMMUNITY CONSULTATION ASSAM URBAN INFRASTRUCTURE INVESTMENT PROGRAM (AUIIP)

Project: Solid Waste Management Project, Lekai

Venue: At the nearby project site, Lekai

Date: 24/11/2018

Time: 11.00 am.

Queries and Responses

- The community was interested to know about the scientific treatment of solid waste.
- It was explained to community how the organic/biodegradable waste will be processed at compost plant and the non-biodegradable waste will be disposed at landfill site by burial.
- The community requested to employ more local people in the project.
- They were informed that already sufficient local people are working under contractors and their message will be conveyed to the contractors.
- The Quality of the contractors should be ensured by monitoring. It was explained that the quality of the construction work is strictly monitored as per guidelines set up by Asian Development Bank.

Snapshot of the Consultation



Consultation among Tea Graden Labourer

COMMUNITY CONSULTATION
ASSAM URBAN INFRASTRUCTURE INVESTMENT PROGRAM (AUIIP)

Project: Solid Waste Management Project, Lekai

Date: 17/11/2018

Venue: Public Auditorium, Lekai

Time: 12.00 pm.

Queries and Responses

The community wanted to know about the exposure tour of local people to visit other state of the country to observe and learn about Solid Waste Management Plant which was planned during ADB visit and the community showed their strong desire for the exposure tour to empower their knowledge regarding solid waste management plant. They were intimated that the matter will be conveyed to higher authority.

The community requested to start the construction work of the ME School as soon as possible. It was assured that the construction work will be started very soon.

They also requested to develop the Playground (club) soon as District Administration promised them.

The community was interested to know about the scientific treatment of solid waste. It was explained to community how the organic/biodegradable waste will be processed at compost plant and the non-biogradable waste will be disposed at landfill site by burial.

The community requested to employ more local people in the project. They were informed that already sufficient local people are working under contractors and their message will be conveyed to the contractors.

The community expressed their happiness for conducting community consultation for local people and suggested to conduct such type of consultation in every month.

Snapshot of the Consultation



ATTENDANCE SHEET

Project: *SOLID WASTE MANAGEMENT PROJECT*

Date: *24/12/2018*

Venue: *NEARBY PROJECT SITE, LEKAI*

Time: *11:23*

SL. NO.	NAME & DESIGNATION	MOBILE NO	SIGNATURE
1	Shanti Ghatowal		
2	Angali Bhumis		
3	Deepali Mura		
4	Anupi Mura		
5	Reena Mura		
6	Leelabati Bhumis		<i>leelabati Bhumis</i>
7	Birashi Mura		<i>बिषाषि मुरा</i>
8	Sarika Bhumis		
9	Sarika Mura		
10	Parvati Bhumis		
11	Lakshmi Karmakar		
12	Meena Ghatowal		
13	Lilshan Bhumis		
14	Manoj Mura		
15	Millan Ghatowal		
16	Pradip Mura		
17	Dipen Barman, Contractor		<i>Dipen Barman</i>
18	Jinti Das, Contractor, lobby office		<i>Jinti Das</i>
19	Manjit Deka Boruah, Contractor		<i>M.D. Boruah</i>
20	Keenakshi Boruah, SEO, PIU, AWIP		
21			
22			
23			
24			
25			

ATTENDANCE SHEET

Project: *SNM, LEKAI, DIBRUGARH*

Date: *17/11/18*

Venue: *PUBLIC AUDITORIUM*

Time: *12 pm.*

SL. NO.	NAME & DESIGNATION	MOBILE NO	SIGNATURE
1	<i>Shivam Pogue, Contractor</i>	<i>7002200115</i>	<i>[Signature]</i>
2	<i>S.K. Patraik. (P.E.) BDC</i>		
3	<i>Nityananda Gogoi, president, Lekai Sammitika</i>	<i>9954427166</i>	<i>[Signature]</i>
4	<i>Milon Saingha</i>		
5	<i>Jayanta Gogoi</i>		
6	<i>Chulak Sharma</i>		<i>[Signature]</i>
7	<i>Abhijit- Gogoi</i>	<i>9924940409</i>	<i>[Signature]</i>
8	<i>Pulker Ali</i>	<i>9954486292</i>	<i>[Signature]</i>
9	<i>Nipon Gogoi</i>		
10	<i>Sonkhi Pathan, Contractor</i>	<i>9577790298</i>	<i>[Signature]</i>
11	<i>Sinti Das, Safety officer, Contractor</i>	<i>7002266708</i>	<i>[Signature]</i>
12	<i>Meenakshi. Baruah, PIU</i>		
13			

Appendix 19: Notification of GRC

GOVERNMENT OF ASSAM
GUWAHATI DEVELOPMENT DEPARTMENT
DISPUR - GUWAHATI - 781006

ORDERS BY THE GOVERNOR OF ASSAM

NOTIFICATION

Dated Dispur, the 1st July, 2015.

NO.GDD.211/2012/32 : In order to resolve the issues relating to resettlement/compensation of the affected persons in Guwahati and Dibrugarh under ADB assisted Assam Urban Infrastructure Investment Programme (AUIIP), the Governor of Assam is pleased to constitute the Grievance Redressal Committee (GRC) comprising of the following members:-

- | | | |
|--|---|------------------|
| 1. Project Director, AUIIP | - | Chairman. |
| 2. Additional Project Director, AUIIP | - | Member Convener. |
| 3. Representative of GMDA | - | Member. |
| 4. Representative of GMC | - | Member. |
| 5. Representative of Dibrugarh Municipal Board | - | Member. |
| 6. Representative of Dibrugarh Development Authority | - | Member. |
| 7. Representative of Affected persons | - | Member. |

Powers and Functions of Grievance Redressal Committee:-

The Resettlement Officer and Environmental Officer in each PIU will be activating the second tier of the Grievance Redressal Mechanism by referring the unresolved complaints upward to the Grievance Redressal Committee (GRC). A hearing will be called with the GRC, if necessary, where the affected person can present his/her concerned issues. The process will facilitate resolution through mediation. The GRC will suggest corrective measures at the field level and assign clear responsibilities for implementing its decision within fifteen (15) working days. The contractor will have to observe status on GRC. If unsatisfied with decision, the existence of the GRC will not impede the complainant's access to the Judicial or Administrative remedies.

The PMU Safeguard Officer will be responsible for processing and placing all papers before the GRC, maintaining database of complaints, recording decision, issuing minutes of the meetings and monitoring to see that formal orders are issued and the decisions carried out.

Sd/- P. K. Borthakur, IAS
Principal Secretary to the Govt. of Assam,
Guwahati Development Department.

Dated Dispur, the 1st July, 2015.

Memo No.211/2012/32-A

Copy to :-

1. The Secretary to the Govt. of Assam, Urban Development Department, Dispur.
2. Project Director, AUIIP, Tripti Tower, G.S. Road, Guwahati-5.
3. The Chief Executive Officer, GMDA, Bhimgarh, Guwahati-5.
4. The Commissioner, GMC, Panbazar, Guwahati-1.
5. All members concerned.
6. P/S to Principal Secretary, GDD for kind information of the Principal Secretary.
7. P/S to Secretary, GDD for kind information of the Secretary.

By Order etc.,

Joint Secretary to the Govt. of Assam,
Guwahati Development Department.

Appendix 20: Compliance of Environment Issue Ref to Last Aide Memoire of ADB

Corrective Action Plan for Environmental Safeguards as per Aide Memoire of ADB for their visit from 19th-22nd Nov 2018

S. No.	Actions	Agencies Responsible	Completion Date	Status
1.	<p>Environmental Clearance for following to be obtained and renewed:</p> <ul style="list-style-type: none"> • Basistha Reservoir (Pending); • For Reservoirs – North Jyothinagar, Nabajyoti Nagar, Hengrabari :to be renewed; • CTO to be obtained from ASPCB for MSW Plant; • In case HMP, Batch Mix Plant are to be used, CTE & CTO to be obtained; • As per EC awarded for MSW Subproject a School in nearby vicinity needs to be shifted and made operational prior to MSW cell commissioning. <p>Compliance with Statutory Environmental Regulations: The PMU shall ensure that (i) all applicable statutory environmental approvals/permits at the national, state and local levels are obtained for the Project and the sub-projects by the PMU and the civil works contractors prior to commencement of the civil works in each subprojects; (ii) the relevant approvals/permits are renewed in timely manner so that the activities under the project continue to be fully compliant with the regulatory requirements of India; and (iii) the terms and conditions stipulated in all such environmental approvals/permits are fully complied with.</p>	PMU/PIU, DMSC and Contractors	Immediately and on ongoing basis thereafter.	<p>Under Compliance</p> <p>Baistha Reservoir: EC will be applied after design finalization.</p> <p>Northjyotinagar: EC has been applied on 25.10.2018 and is under process.</p> <p>Nabajyotnagar and Hengrabari: Respective ECs have been applied on 27.11.2018 and are under process.</p> <p>The construction of the school (M.E school and Angadwadi center) has been sanctioned and placed at the disposal of Deputy Commissioner, Dibrugarh.</p> <p>All statutory permits/ approvals under national, state and local rules</p>

S. No.	Actions	Agencies Responsible	Completion Date	Status
				<p>are either obtained or under process to obtain. Pending permits / NOC will be obtained before start of the civil works. Renewal of permit/ NOC will be done on timely manner. Application will be send prior to expiry date.</p>
2.	<p>MSW project site requires huge quantity of Earth work for which Environmental Clearance from DEIAA is required. The PMU shall ensure that the construction materials are sourced by the civil works contractors from licensed and statutorily compliant mines, quarries, borrow areas and construction equipment.</p>	<p>PMU/PIU, DMSC and Contractors</p>	<p>Immediately and on ongoing basis thereafter.</p>	<p>Under Compliance</p> <p>NOC or Transport Permit (TP) to transport earth work from borrow pits to the SWM site for civil works from Divisional Forest Officer, Dibrugarh has been applied and is currently under process.</p>
3.	<p>Environment Safeguard Expert working with PIU Guwahati transferred to PMU from July 2018 onwards. Strengthening PMU/PIU: The PMU shall ensure that it is further strengthened with one fulltime, qualified and experienced environmental professional at PIUs Dibrugarh till the closure of the project. This position could be filled either through deputation from state government departments or by engaging a consultant on contractual</p>	<p>PMU</p>	<p>31 Jan 2019</p>	<p>Yet to be Complied</p> <p>The post is yet to be sanctioned by the Government.</p>

S. No.	Actions	Agencies Responsible	Completion Date	Status
	basis.			
4.	<p>Two Environment Safeguards Expert, Two Social Safeguards Experts and One Safeguards Compliance Expert to be working on the project as per DMSC Contract agreement, but no expert was available during ADB Mission.</p> <p>Strengthening DMSCs: The PMU shall ensure that environmental safeguard experts from DMSC are mobilized to Guwahati and Dibrugarh project sites and remain there till the closure of the project.</p>	DMSC and PMU	Immediately	<p>Under Compliance</p> <p>Two Environmental Experts namely Dr. Ardhendu Mitra and Mr. Partho Sarathi Mukherjee from DMSC are mobilized to Guwahati and Dibrugarh on intermittent basis.</p>
5.	<p>Environmental monitoring not being carried out as per ADB approved environment monitoring plan. Monitoring of Environmental Parameters: The PMU shall ensure that the monitoring of environmental parameters is carried out as per the approved EMPs.</p>	Monitoring agency, Contractors, DMSC and PMU	Immediately and Continue thereafter.	<p>Under compliance</p> <p>It is suggested to the contractors and will be ensured that the Monitoring of parameters – air, water, noise will be carried out as per approved monitoring plan. It will be continued throughout the project implementation</p>
6.	<p>No analysis of monitoring results was reported in last EMR. Analysis of Results of Monitoring and Reporting: The PMU shall ensure that detailed analysis of test results obtained during monitoring of environmental parameters at project sites (such as ambient air quality, noise levels, water quality, soil quality</p>	PMU/PIU, DMSC, and Civil Works Contractors	Immediately and Continue thereafter.	<p>Under compliance</p> <p>Analyses of the current monitoring reports have been done and are attached in</p>

S. No.	Actions	Agencies Responsible	Completion Date	Status
	etc.) is undertaken as per the ADB approved environmental monitoring plan. The analysis and the corrective actions taken shall be reported in the semiannual environmental monitoring report submitted to ADB.			the Semi Annual Environmental Monitoring report for the period of July to December 2018.
7.	Implementation of EMP to be carried out as continuously till the end of the project. Implementation of EMP: The PMU shall ensure that the civil work contractors strictly follow the provisions stipulated in the ADB approved environmental management plans with special focus on occupational and community health and safety aspects; dust control at camp sites.	Civil Works Contractors, DMSC and PMU/PIU	Immediately and Continue thereafter.	Under compliance Approved environmental management and monitoring plans for the specific project is under implementation. EMMP focused on occupational and community health and safety aspects.
8.	Disclosure of IEE in local language not done. Public Disclosure of Environmental Documents: The PMU shall ensure that the soft and hard copies of summary of IEE reports are made available in an accessible place (e.g., local government offices, libraries, community centers, etc.), and a summary translated into Assamese for the project-affected people and other stakeholders.	PMU/PIU	Immediately	Under compliance The translations of the IEE reports are under process and will be uploaded at the earliest.
9.	Public Consultation process needs to be further strengthened and reported in EMRs on regular basis. Public Consultations: The PMU to ensure that adequate public consultations are carried out with the local residents during implementation by (i) PMU/PIU staff; (ii) environmental experts and site staff from DMSC; and (iii) the environment and safety officer officers of the civil contractors; and (iv) the inputs from these consultations are incorporated	PMU/PIU, DMSC and Civil Works Contractors	On on-going basis	Under compliance It is ensured that public consultations are being carried out during implementation of the project. Corrective mitigation measures will be

S. No.	Actions	Agencies Responsible	Completion Date	Status
	during implementation of works.			planned as per suggestion from locals. Safety officer of contractor will conduct regular tool box training for their labourers / staff Training and consultation documents are recorded and incorporated in environment monitoring report.
10.	Shall be due from January 2019 onwards. The PMU to submit semi-annual environmental monitoring report to ADB for reporting period from July to December 2018.	PMU	15 Feb 2019	Under Compliance Report is already under preparation by DMSC and will be submitted on or before 15 Feb 2019.