Environmental and Social Due Diligence Assessment of *Lakhimpur Kheri RNG Pvt. Ltd, Unit-Balrampur , Gata No-81 & 84, Balpur Road, Village-Sirisha, Pargana, Tehsil and District-Balrampur, Uttar Pradesh*

Input Feed material: 240 TPD press mud & Agro-Residue

Output – 10 TPD CBG & 44 TPD Manure

Submitted on: **10 June 2023**

Submitted to:

EverEnviro

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Preamble

This report is based on the Environmental and Social Due Diligence (ESDD) assessment carried out for assessing EHS performance and compliance of the Lakhimpur Kheri RNG Pvt. Ltd., Unit – Balrampur developed by M/S EverEnviro Resource Management Pvt. Ltd. (ERMPL) with national legal requirements on environment, health & safety; International Finance Corporation (IFC) Performance Standards; Environment and Social Governance System of Ever Source; and World Bank Group's Environmental Health and Safety Guidelines. The findings and conclusions included in this report have been arrived at through site visits, interactions with relevant team from the Company, and review of compliance mechanism and management system.

Telecon dates	*06th December 2022 with* • *Mr. Sandeep Srivastava (Head - ESG)* • *Mr. Shajahan (Vice President - Environment)* • *Mr. Rajkumar RG (ESG Manager)*
Assessment Location and Field discussion	*20th December 2022 with* • *Mr. Shajahan (Vice President - Environment) at Balrampur Site*
Assessment conducted by	• *Megha Roy (Auditor)* • *Tanmay Kokate (Auditor)* • *Vishwa Trivedi (Team Leader)*

It should be noted that, while efforts have been made to address as many significant aspects and issues as possible to verify conformance with the reference framework, the assessment is subject to the documents and records presented by the company; sampling during audit; discussions with company representatives, stake holders and understanding of site conditions through discussions and photographs. Therefore, absence of a comment on any environmental and social related issues does not necessarily imply conformance with the relevant requirements of the specified standard/ regulations.

The material in this report reflects EMC's best judgment in light of the information made available to it at the time of report preparation.

Any use that a third party makes of this report, or reliance on, or any decision to be made based on it, is the responsibility of such third party. EMC accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions taken based on this report. In addition, the information provided in this report is not to be construed as legal advice.

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Abbreviations

BMTPC	Building Materials and Technology Promotion Council
CPCB	Central Pollution Control Board
DG set	Diesel Generator set
EC	Environmental Clearance
EIA	Environmental Impact Assessment
EMP	Environmental Management Plan
E&S	Environmental and Social
EHS	Environmental, Health & Safety
EHSS	Environment Health Safety and Social
EMC	Environmental Management Centre LLP
EPF	Employee Provident Fund
EPRP	Emergency Preparedness and Response Plan
ESAP	Environmental and Social Action Plan
ESGDD	Environmental Social and Governance Due Diligence
ESMS	Environmental and Social Management System
ESI	Employee State Insurance
HR	Human Resources
HSE	Health, Safety and Environment
IFC	International Finance Corporation
INR	Indian National Rupees
KWH	Kilo Watt Hour
KVA	Kilo Volt Ampere
LPG	Liquified Petroleum Gas
MSDS	Material Safety Data Sheet
NABL	National Accreditation Board for Testing and Calibration Laboratories
NOC	No Objection Certificate
NGO	Non-Governmental Organization
OHS	Occupational Health and Safety
PPE	Personal Protective Equipment
PM	Particulate Matter
PUC	Pollution Under Control
RCC	Reinforced Cement Concrete
RO	Reverse Osmosis
SHE	Safety Health and Environment
STP	Sewage Treatment Plant
SPCB	State Pollution Control Board
WB-EHS	World Bank Group's General Environmental, Health & Safety Guidelines

1 Introduction

1.1 Background & Scope

EverEnviro Resource Management Pvt Ltd (ERMPL, the Company) is involved in the business of handling Solid Waste Management encompassing Municipal Waste, Agricultural Waste like Paddy Straw, and Press Mud (waste from sugar mills), and Construction & Demolition Waste.

ERMPL engaged Environmental Management Centre Private Limited (EMC) to conduct Environment and Social Due Diligence (ESDD) assessment of its eight (8) Priority I projects across India with the objective to determine risks and impacts associated with the projects and aligning with EverEnviro's ESGMS and EHS policy and commitments for its projects mentioned in **Table 1-1** with the timeline mentioned in the schedule.

Table 1-1: List of Eight (8) Priority I Projects for ESDD Assessment

#	Type of Project	Location	Number of Projects	Dates
1	**Paddy Straw to Bio-CNG Projects (State of Punjab)** This project procures Paddy straw from the farmers and uses anaerobic digestion to convert the feedstock into Renewable Natural Gas (RNG) and compost.	Dhuri, Patran, Jagraon, and Gurdaspur	**4**	12 – 16 December
2	**Press Mud to Bio-CNG Projects (State of UP)** This project procures Press Mud from the Sugar Mills and uses anaerobic digestion to convert the feedstock into Renewable Natural Gas (RNG) and compost.	Balarampur and Kumbhi	**2**	19 – 21 December
3	**MSW- Bio-CNG projects (Delhi, UP, Gujarat and Karnataka)** This project collects and transports Municipal Solid Waste and using anaerobic digestion converts the feedstock into Renewable Natural Gas (RNG) and compost.	Okhla, Delhi	**1**	19 – 21 December
4	**C&D Waste Recycling Project** This project collects and transports construction and demolition waste and converts them into aggregates and value-added products using sustainable technologies.	Jahangirpuri, Delhi	**1**	19 – 21 December
Total Number of Priority I Sites to be assessed			**8**	

This report presents EMC's assessment of the **Lakhimpur Kheri RNG Pvt. Ltd., Unit – Balrampur, Uttar Pradesh** project based on requirements of the reference framework, and an Environmental & Social Action Plan to address the non-compliances and gaps identified.

1.2 Reference Framework for ESDD

The reference framework for the ESDD included:

a) Applicable local, national, and international environmental and social (including occupational health and safety) legislation in India
b) Good International Industry Practices (GIIP)
    i. IFC Performance Standards, 2012;
    ii. IFC/World Bank EHS General and Sector Specific Guidelines as applicable;
    iii. ESGMS requirements of GGEF (developed by Ever Source)[1]

1.3 Approach and Methodology

The approach and methodology for undertaking the ESDD as per scope of work and reference framework outlined in Section 1.1 and 1.2 respectively is presented in **Figure 1-1** and detailed in the subsequent sub-sections.

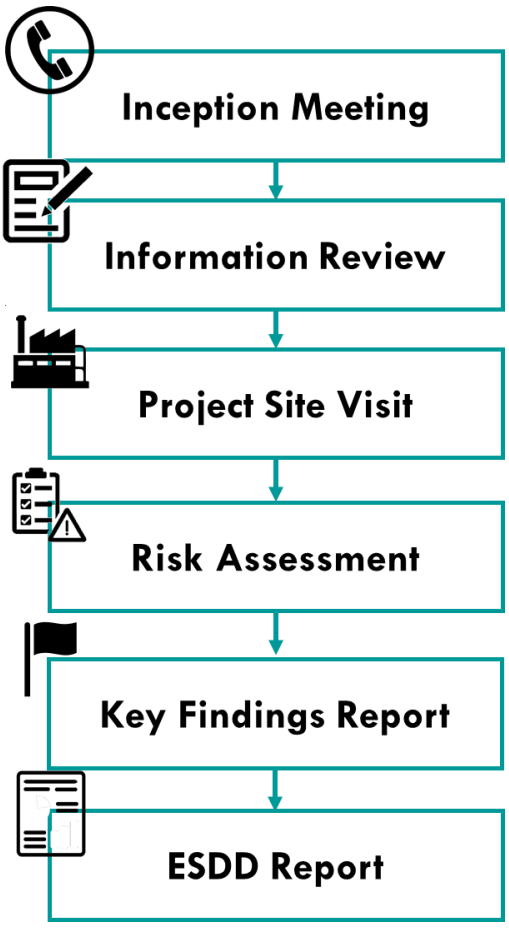


Figure 1-1: Approach and Methodology adopted for undertaking the ESDD Assessment

[1] https://www.eversourcecapital.com/app/uploads/2020/11/201105-ESG-Policy-ESGMS_GGEF_FINAL.pdf

1.3.1 Inception Meeting

A conference call was conducted between EMC Team and the Company on 06 December 2022 with the following objectives:

- Explain the background of the assessment (by the Company)
- Obtain a brief overview and updates on the overall operations of project sites (by the Company)
- Explain the approach and methodology that was to be adopted for the assessment (by EMC)
- Finalize timeline of the assessment (by all, and agreed upon mutually)
- Finalize days/dates for conducting the site visits and logistics

The inception meeting was also be used to identify the point of contact for the ESDD at the Company's end and at the project sites, identify departments and functions with whom discussions would need to be conducted as part of the assessment, and boundaries of assignment.

1.3.2 Information Review

Information obtained from Company

EMC prepared a **Preliminary Information Checklist** for obtaining information about the Company and the project site under the assessment scope. The checklist covered aspects related to corporate management and project specific information and was shared with the Company on 06 December 2022. A list of documents to be kept ready by the point of contact during the project site visit was also included in this checklist. Information sharing was completed by the Company on 02 January 2023.

The information request included (but not be limited to):

- Details about the project site in terms of size, exact location, etc.
- Consents, permits, approvals, and licenses related to the environment, health and safety, and employee welfare;
- Human resources on roll/ contracted/ casual breakdown by gender at various facilities
- Systems to ensure occupational health and safety; Life, Fire, and Safety (LFS) procedures; and disaster and emergency response management plan;
- Reports of studies- Conducted for the projects such as Environmental Impact Assessment, and Resettlement Action Plan, Records associated with the implementation of management plans presented in the studies;
- Systems to ensure resource efficiency and pollution prevention such as hazardous waste management, effluent treatment, water use;
- Documents related to the management practices and implementation of procedures adopted by the Management on environmental, social, and health and safety at corporate level

Secondary Literature Review

A review of secondary literature on the Company and the project under the ESDD scope for the items listed below was conducted and is presented in this report:

- Proximity of project to sensitive receptors such as municipal dump sites, critically polluted areas, protected areas, hazardous waste landfills
- Sources of pollution around the project location, especially industrial activities
- Vulnerability to natural disasters

- Company and projects reputation in public domain on E&S aspects

1.3.3 Offline Assessment of Project

Assessment of Project and Company Management was carried out through telephonic discussions on 06th December 2022 with the Company. Discussion topics included:

- Understand the measures planned/ undertaken for environmental, safety and social management on site including grievance handling, worker engagements and training, procedures for prevention of sexual harassment for women workers, and external grievance management.
- It also involved understanding the following aspects of project implementation:
  - Organization structure, and management at project level
  - Organization's capacity on management of E&S aspects of their business was also understood.
  - Management of implementation of legal compliance requirements in the projects.
  - Land procurement/ purchase procedures for projects, management of land use conflicts.
  - Review of procurement procedures, contracts/ agreements/ work orders to assess the environmental and social aspects included in primary supply chain management/ contractor management
  - Past actions on management of grievances from community neighboring the projects.
  - Other items from consents, clearances, EMP that are practice based and need to be implemented at site
- Review of **documents and records** related to environmental and social legal requirements, clearances/ consents/ approvals obtained, records related to compliance with conditions of these clearances etc.
- Review the **emissions** (air quality and noise monitoring), water and wastewater quality monitoring, resource efficiency, energy efficiency, waste management initiatives etc. employed on site.
- Review of **management system documents** (such as E&S policy, emergency plan, standard operating procedures including EHS aspects, system for maintaining legal documents, incident reporting and investigation mechanism, etc.), **records** supporting implementation of the management systems (such as emergency mock drill records, incident investigation reports, training records, worker & community grievance logs etc.).
- Strategy on resource efficiency

1.3.4 On-site Assessment of Project

A site assessment of the project was carried out on 20th December 2022. A walk-through of the project site was conducted, and the key aspects reviewed during the walkthrough included:

- Verification of information provided during the **offline assessment**
- Extent of implementation of **good and safe construction practices**
- **Occupational health and safety** practices adopted by workers
- **Housekeeping** across the site
- **Waste management** (construction waste, limited hazardous waste, scrap etc.)
- Worker **housing conditions**

- **Management of plants/ equipment** setup in the project area (such as batching plant, diesel generator sets, electrical room)
- Presence of **child labour, adolescent labour**
- Review of **resource use** such as energy, water, and other materials as relevant based on the secondary data made available by the Company.
- Review of **working conditions at the site** for on roll and contract workers (including but not limited to employment relationship through safeguarding worker rights under national labor and social security laws and regulations; non-discrimination; forced labor and child labor; freedom of association and collective bargaining; etc.)
- Understanding of worker and labor camp management practices

Procedure of Audit adopted for On-site Assessment of the Project

- The project team was familiarized with the audit scope and agenda. It was followed by an understanding of the project layout, organizational structure, contract details, and status of operational activities at the site.
- A detailed reconnaissance was carried out throughout the project site to understand the ongoing activities, drainage, health & safety, waste management, and labour welfare practices that were being followed at the project site.
- Discussions with the project in charge, safety manager, site admin, contractor's team members, labourers, and security personnel were conducted to understand the implementation of Environmental Health and Safety (EHS) practices at the site.
- E&S regulatory compliance and management system documents and records related to the site and its operations were reviewed and discussed with the respective team members. Additional documents required to be reviewed were identified and a request list for the same was shared during and after the site visits.

The list of personnel interviewed during the site visit include:

Table 1-2: List of Personnel Interviewed at the Balrampur Site

From ERMPL (the Company)
1. Mr. Anoop, Plant EHS Head
2. Mr. Chandramouli, Civil Works In charge
3. Mr. Yogesh Shukla, Press mud Handling In charge
4. Mr. Shivendra, Plant Admin/HR Head
5. Mr. Nikhil, Store Head
6. Mr. Ramjanak, Chemist
From Thermax Limited (the Contractor)
1. Mr. Abhilash Sinha, Civil Works In charge
2. Mr. Mushtaq Khan, Store Head
From Raj Construction (the Sub-contractor)
1. Mr. Vinay Tripathi, Safety Supervisor

1.4 Risk Assessment

A Desk based Risk Assessment at a Company Level and site visit-based assessment of project was carried out. Documents were reviewed to further analyse the risks to the Company. A Gap Assessment against the Reference Framework was carried out.

1.5 Key Findings Report

Post conclusion of the site visit & interviews, and review of documents received from the Company, a concise back-to-office key findings report focusing on principal findings and identified risks, impacts, and opportunities was prepared. This report was discussed with ERMPL on 29 December 2022 over a video call and shared with them on 31 December 2022.

1.6 ESDD Report

This document presents a detailed draft report fully reflecting the scope of work suggested in the proposal submitted by EMC to ERMPL. EMC will provide a final ESDD report within five working days of receipt the comments from the Company on the draft ESDD issued.

1.7 Organization of the ESDD Report

The conclusion from assessment of the project with the reference framework and actions to address the non-compliances is presented in this report. The report is organized into the following sections:

- The ESDD background, scope and methodology followed are elaborated in the **Section 1.**
- **Section 2** presents brief details about the Project. The results of the secondary information review, summary of the labour camp, EHSS practices adopted by the Company are also presented in this section.
- Status of compliance of the project under the scope of work with the EHSS Legal Regulations is presented in the **Section 3.**
- **Section 4** presents the alignment of the project with IFC Performance Standards and WB-EHS guidelines.
- A detailed E&S Action Plan addressing the identified non-compliances and non-conformances in the project under the scope of work indicating prioritization for each action has been presented in **Section 5.**
- Additional recommendations of the assessment are presented in **Section 6**.

2 About the Project

Project at a Glance

SPV Name	Lakhimpur Kheri RNG Pvt. Ltd,Unit-Balrampur
Location	Gata No-81 & 84, Balpur Road, Village-Sirsiya, Pargana, Tehsil and District-Balrampur.
Project land area	11 Acres
Coordinates	27°23'54.0"N 82°07'28.3"E 27.398340, 82.124532
District	Balrampur (Uttar Pradesh)
Nearest Access Road	120 meters from MDR-Balrampur Balpur road.
Nearest Highway	700 meters from Balrampur Gonda Highway.
Nearest Substation	Bhagauti Ganj Substation of Uttar Pradesh Power Corporation Limited- 11 kVA (4 KM)
Water Required	10 Cum per day
Source of Water	Ground water
Liquid Fertilizer	Using for making solid compost and Distributed /Sold to Farmers as a Liquid fertilizer
Power Required	11,500 kwh /day
Press Mud intake capacity	240 MT per day
Biogas Generation	25,440 m^3 raw biogas per day
Biogas Utilized for Genset	1215 m3/day
CBG Generation	10 TPD
Expected Manure Production (Solid)	~ 44 TPD.
Total Project Cost (including IDC andGST)	Rs 708.23 Mn.

Project Location:

- The project is located in the village of Sirsiya within the Pargana, Tehsil and District of Balrampur in the State of Uttar Pradesh[2].

[2] Location on Google Maps - https://goo.gl/maps/ZvosMBq6QAYzhncE7

Status of Work:

- The project is currently in construction phase and is expected to commence operations in 2024.

Connectivity:

- The project is located 120 meters from MDR-Balrampur Balpur road and 700 meters from Balrampur Gonda Highway. The project is bordered farmlands on three sides.
- The nearest railway stations are Balrampur (approximately 4.8 km north-east). In addition, the project is also located in proximity to the UPSRTC Balrampur Bus depot (approximately 8 km north-east).
- Chaudhary Charan Singh International Airport in Lucknow is located at approximately 160 km south-west of project. The nearest airport is Shravasti airport approximately 24 km from the project but it is not an international airport.

Social Infrastructure:

- District Memorial Hospital Balrampur U. P. is located at approximately 7.8 km.
- Balrampur Nagar Police Station is located at approximately 7.2 km distance on Gonda Road to the east side of the project.
- Balrampur Fire Station is the nearest Fire station from the project location at a distance of 5.4 km to the east of the project.

2.1 Project Description

Identifying the Technology and Business case in Local context

The plant will run around the clock, using sophisticated and proven Anaerobic Digestion technology to convert organic waste into Biogas and Organic Fertilizer. Anaerobic digestion is a waste management and renewable energy generation process in which microorganisms break down biodegradable material such as cow dung, sugarcane press mud, poultry litter and Agri-waste in the absence of oxygen. Anaerobic digestion technology which is already developed in India and commercialized at various other projects is considered a low-risk, high-output technology.

Biogas will be generated by anaerobic digestion of biodegradable organic waste and will be enriched bymicrobial methanation. The methane enrichedbiogas will be first cleaned for the removal of H2S & CO2 and will also be compressed for use as a heating fuel by the local industries, canteens and hotels.

Also, it is the essential plan of the project, to provide the BioCNG for automotive fuel as per BIS 16087 2016 BioCNG standard for vehicles, in accordance with the 2015th updated and therefore officially sanctioned Central Motor Vehicles Rules amendment.

The Digested Bio-Manure will be sold as Organic-Fertilizer to the farmers as well as vegetable growers enhancing self-reliance in this critical cost segment of rural economy.

Project Strategy

Ever Enviro is focusing on a **five-pronged strategy**:

- Execute the project successfully andshowcasing the plant onlong term basis as a reliable partner for BioCNG.
- Creating a strong localpartner and relationshipwith the off takers of BioCNG on long term basis.
- Contributing to India'scommitment for reduction ofgreenhouse gas emission atParis (COP 21) with the helpof BioCNG as vehicle fuel.
- Harnessing economic strength of Sugar cane farmers by creating employment opportunities locally, increasing soil fertility and avoiding pesticides by using organic Fertilizer in line with Prime Minister Narendra Modi's vision of doubling farmers' income by2022.
- Establishing a new and sustainable finance for Ever Enviro

Feed Stock Storage

Sugarcane Press Mud is available from Balrampur Chini Mills and can be accessed in upmost transportation distance. Issue with press mud is its availability for a limited period only in sugar season. That makes it necessary, to keep a stock for off-season to ensure continuous supply. By average calculation, a sugar mill in Uttar Pradeshwill operate usually approx. 140 days peryear, in Kharif season only. Therefore, it is required to store a capacity for the Off-season operation.

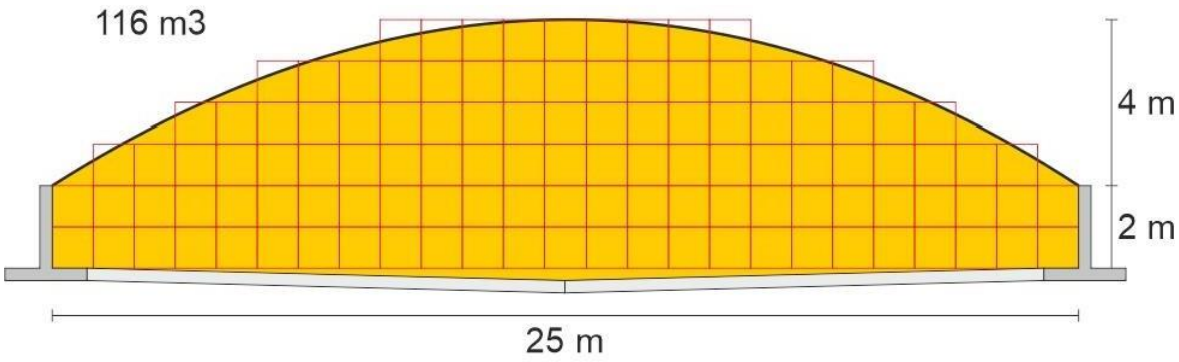
To consider a longest period of the two Off-Seasons of max. 225 days, and a consumption of 240 tons as per estimated infeed per day, it will require a storage capacity of approx. 54,000 tons. This quantity with a surplus amount for safety has been considered for sizing of the required Silaging storage yard.

The sugar factory is operating for the 4-5 months and the press mud generationand availability for the same period so for the annual operation of biogas plant we are storing the press mud. The land for press mud storage is dedicated of 2.5-3 acres accordingly.

Pressmud And Agro residue Consumption per Day	240 MT
No of days' operation per year	365
Total quantity of pressmud and Agro residue required per year	87,600 MT
Pressmud consumption during season @ 135 days-:	32,400 MT
Pressmud storage quantity	54,000 MT

This is consistent with the practice followed by international biogas firms. Therefore,a land area earmarked as a collection site adjacent or close to the plant site is beingconsidered for this project.

The feedstock storage at the storage location shall be undertaken in a planned manner along with the firefighting arrangement to avoid any incident of damage fromfire or harsh climatic conditions. The following figure illustrates the shapes of stacks created for storage of press mud.



Storage of Press Mud at the Plant

BioGas Generation

Ever Enviro's Balrampur plant will run around the clock all-round the year (24/365). The biogas generation will take place by using proven and state-of-the-art Anaerobic Digestion CSTR - (Continuous Stirred Tank Reactor) Technology. Anaerobic Digestion is a waste management and renewable energy generation process in which microorganisms break down biodegradable material in the absence of oxygen. Anaerobic Digestion Technology was developed long back in India and commercialized in Europe, and is technically considered a low-risk, high-output technology. Feeding will be done by putting the feedstock (organic waste) mix into the mixing pits, which are concrete tanks with submersible mixers inside.

The feedstock will get mixed with already digested manure out of the digesters, to become a fluid mix, which will be pumped into the digesters. The Biogas generation technology considered for this project is already proven in Germany. After undertaking a detailed study of the best equipment and their best suppliers, which are currently being used for Biogas plant installations in India, it was decided that the main critical equipment will be imported from Germany and installed under the supervision of German experts & Indian engineers.

The generated biogas will have a composition of approx. 52% - 60% of methane (CH_4),36% - 44% of carbon dioxide (CO_2), and minor quantities of H_2S, N_2 and H_2O. The rawbiogas will be collected in a double-membrane gas capturing system on top of the digesters.

Moisture and H2S Removal

A blower will suck the raw biogas out of the gascapturing double membrane roof. In further process, the moisture saturated raw biogas willget cooled, so that condensed water will be released in liquid form in a moisture trap. After re-heating of the biogas, an activated carbon filter system will remove the hydrogen sulphide(H2S) in biogas, to

Conform to acceptable levels. Now, in further process, the de-humidified and de-suplhurized biogas will reach the Biogas Upgradation unit.

BioGas Upgradation

Main constituents of Biogas are methane, carbon dioxide, sulphur compounds (H2S, siloxanes), water and minor contaminants. (O2, N2, ammonia, chlorine, fluorine, etc.).The final composition of biogas is variable, and strongly depends on the source of organic matter for feedstock. They are released by the bacteria and micro-organisms,involved in
the metabolism of anaerobic digestion process inside the digester. At EverEnviro 's Balrampur biogas project, the here listed composition can be expected. Asthere are several parameters, which may cause a change in character, composition and quantity, the further processes will have to respond with flexibility. Choice of technology is Membrane based Gas Separation Technology.

After the pre-treatment, the biogas is compressed to 15bar pressure and feed to membranes for upgradation. The heat of the drying of the biogas, the heat from the compressor and the heat from cooling the gas after the compressor may be recovered by using a heat recovery system, this option makes it possible to recover the optimal amount of heat, so less energy is needed.

For the separation of carbon dioxide Ever Enviro uses membranes with the highest selectivity available in the market. They pass CO2 easier and quicker than methane. The membrane modules in the system are arranged in 2 stages. In this design the permeate gas from the different stages is recirculated to obtain the highest efficiency (>97%). and lowest methane loss (<0.5%). This is a significantly lower methane slip value than many other biogas purification technologies.

The final refined gas composition will suit to the norms of the **Bureau of Indian Standards (BIS)**, which is mandatory to get approval from Indian Petroleum and Explosive Safety Organization (PESO) for BioCNG (CBG) sales to Industries, or as a vehicle fuel, and must always have methane concentration higher than 90%. The Upgradation unit has an online-monitoring system with "gas quality" analysis, and gasflow including data logging, for raw biogas as well as for the BioCNG itself.

Compression and Cascade Filling

The refined, cleaned biomethane (BioCNG / CBG) will be compressed up to 250 bars,and filled into high-pressure-cylinder bundles (cascades). The cascades of bundled BioCNG (CBG) cylinders will be transported with the help of trucks to the client's end. In return, the trucks will bring the empty cascades for refill. As the approached clients are very close by, and their demand is very high, the dispatch and return process is repeated minimum 2 times per day. This will reduce the demand for the number of cascades, and therefore will have a very positive impact on the cost calculation (CAPEX & OPEX) of the project.

Fertilizer Generation

According to the feeding quantity and liquid level inside digesters, digested substrate slurry will leave the digesters daily. **Digestate is an excellent Fertiliser,** containing all nutrients and micronutrients necessary for modern farming, including nitrogen, phosphorus and potassium. Since no nutrients are lost during AD, farmers can close the nutrient cycle and reuse these vital minerals. Additionally, organic matter in digestate can build up the humus content in the soil. This benefit is unique to organic Fertilisers which is particularly crucial for arid and semi-arid lands with low carbon content, or tropical and sub-tropical farming with tendency for monoculture farming likesugarcane. Anaerobic Digestion closes the loop by allowing nutrient recycling.

- **Phosphate**s' world reserves are declining at an alarming pace and depletion wouldbe disastrous for further food production, as it is an indispensable nutrient for plant growth. AD gives the possibility to recycle this valuable nutrient from organic waste streams.

- The percentage of readily available **Nitrogen** is higher in digestate compared to the same organic material in its raw form, thereby increasing its fertilising value. In addition, organic Fertilisers have a "softer" impact than mineral Fertilisers which have high levels of available nitrogen. Where the latter poses a higher risk of nitrogen leaching into water, the former takes effect slowly, providing nutrients steadily to plants for up to three years. 1 ton of artificial Fertiliser replaced with digestate saves 1 ton of oil, 108 tons of water and 7 tons of CO_2 emissions (Source Anaerobic Digestion and Bio Resources Association, UK).

Preferentially, this **Liquid Fertiliser** will be sold, and taken by tanker trollies or trucksdirectly to nearby farmland. As per crop seasons requirement there are times, when farmers can't accept the liquid Fertiliser to applicate the same in the fields. During suchtimes, the demand gap will have to be bridged by mixing the slurry with chopped biomass, which can be any farmyard organics, but can also be bagasse, poultry litter, banana stem, or casuarina leaves or even already finished compost. The slurry/solid mix will be stockpiled, to undergo a process of windrow composting. The thus set up compost piles will have to be turned over frequently with an aero tiller. After a ripeningand drying process of several weeks, the result is a high quality **Solid Organic Fertiliser** which can be milled, screened and bagged, and even stored for a long timewithout further degradation.

Because of the unpredictability of farmers daily requirement, who might even queue up on some days to pick up the slurry, it is good to have a stock of liquid slurry. On theother side, during the rainy days, especially in monsoon time, neither liquid Fertiliser off-take, nor compost preparation can be handled. A **Liquid Fertiliser Buffer Lagoon**with sufficient storage volume will serve good during such times as the farmers can access it readily and have no storage hassle during monsoon. As there is high demand for high quality **Organic Fertiliser** in India, the stocked bags can always be sold at a premium.

Utility Requirement under plant operation

Power for Captive Consumption – The Biogas Project depends power from state electricity grid. In case of power shut down, or staggering periods power back up is required. Therefore, a Biogas Genset will be in place, to step in for the inevitable minimum load. Total Power demand of the plant under full operation is estimated as approx. 600 kW or suitable size and shall be equalized byintelligent power management to the up most, to avoid peak load.

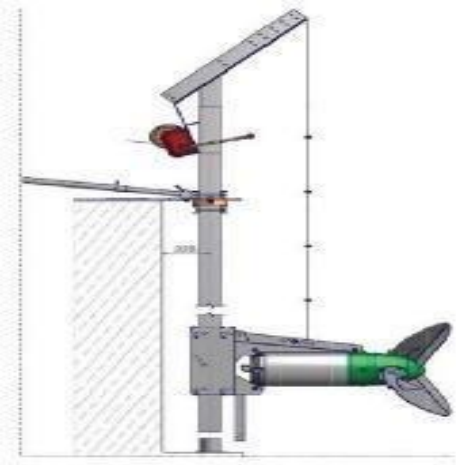
Process Heat Requirement – Once the Bio- Methanation Process commences and gets in full swing, heating of the digesters throughout the year up to the required constant temperature level of 38°C shall be ensured. This will be done via heating coils inside digesterand hot water circulation. A small Biogas Boiler will heat the water.

Water demand – After initial filling of the digesters up to half of their liquid level with water, the biogas generation process will work independent from any water supply, so there is no need for water as such. The Biogas Upgradation unit will have to refill the closed loop coolingcircuit because of evaporation losses in cooling tower daily with approx. 10 m^3 of water.

2.2 Technical Specifications of Plant Components

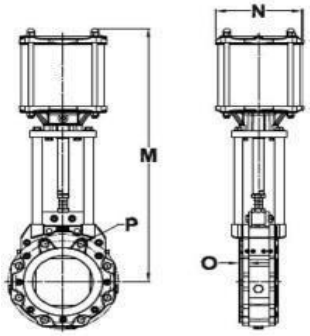
Feed preparation Tanks

Each Feed Preparation Tank is of approx. 100 m3 capacity, made of RCC and is equipped with Submersible Mixers for proper mixing of feedstock and slurry coming from digester or separator. Each tank is divided into 2 sections by a partition screen to retain the larger solid particles present in the substrate within the first compartment. According to their content in feedstock material, stones & gravel and other impurities will accumulate in the first compartment and must be removed frequently. The pipe entry towards the substrate pump is placed in the second compartment, from where the purified Slurry-Mix is fed, batch-wise, to the digesters.



Mixer in Feed Tank

Pumping Station



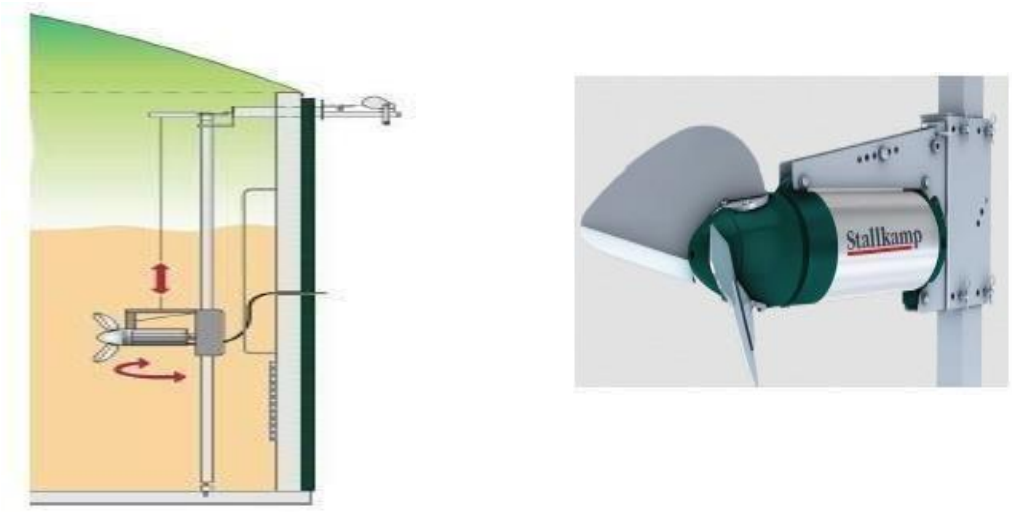
Screw Pumps in Pumping Station

The two parallel working heavy duty positive metering screw pumps are installed for transportation of any substrate, within the biogas plant from tank to tank. In case of larger particle size in substrate flow and/or fibers, the substrate mix will forcefully pass an inline crusher before it enters the pumps. Substrate flow is monitored by a PLC with the help of Pressure Sensors, Dry Run Protection Thermo Sensors, Flowmeter, Positive Temperature Coefficient (PTC) Thermistor Control Sensors. The substrate flow itself is managed by PLC with the help of Bi-directional Pneumatic Gate Valves.

Digester with Mixing and Heating System

The system consists of two digesters, each of approx. 5,900m3 (net) capacity having a diameter of 32 m and a height of 9 m. Each digester is fitted with several hot water pipe circuits on the inside, close to the wall. If required, hot water(60° C) is circulated through these pipes, to maintain a constant digester temperature of 19pprox.. 38° C.

There are 7 Submersible Mixers inside of each digester sedimentation for mixing the content intermittently (the so called “Continuous-Stirred-Tank-Reactor” (CSTR)) to ensure homogenous condition in each corner of the digester withregard to temperature and microbiological composition and, also supported by thixotropic forces to avoid or flotation otherwise caused by gravity effects. These Submersible Mixers can be positioned by height and direction in the right position. For ensuring a safe and sustainable, as well as manualoperation on demand, PTC- (Positive Temperature Coefficient) Thermistor-Control-Sensors will be installed, and monitored by PLC, too. All the digesters are of the same design and are interconnected through pipes and valves for equalizing liquid level, though they usually are operated separately. Pressure-, Temperature-, and Level-Sensors are fitted to thedigesters, and connected to the PLC, to ensure controlled operational conditions.



Submersible Mixer inside the digester

Bio Gas Capturing System

Each Digester is equipped with a double membrane Biogas Balloon roof at the top for storage of gas. They are designed to store biogas from anaerobic digestion and are manufactured with biogas resistant polyester reinforced PVC membranes, tailored, and welded with high tech equipment. Both the membranes are matching international standards regarding tear strength, tensile strength, gas permeability with respect to methane, temperature, and UV-radiation resistance. The system is made with a single upper membrane, pressurized by an air fan, 24 hours a day to give a pneumatic push on the inner biogas chamber, keeping the biogas chamber at a prefixed and constant positive pressure. The light weight of the Double Membrane allows large gas holders to be constructed.

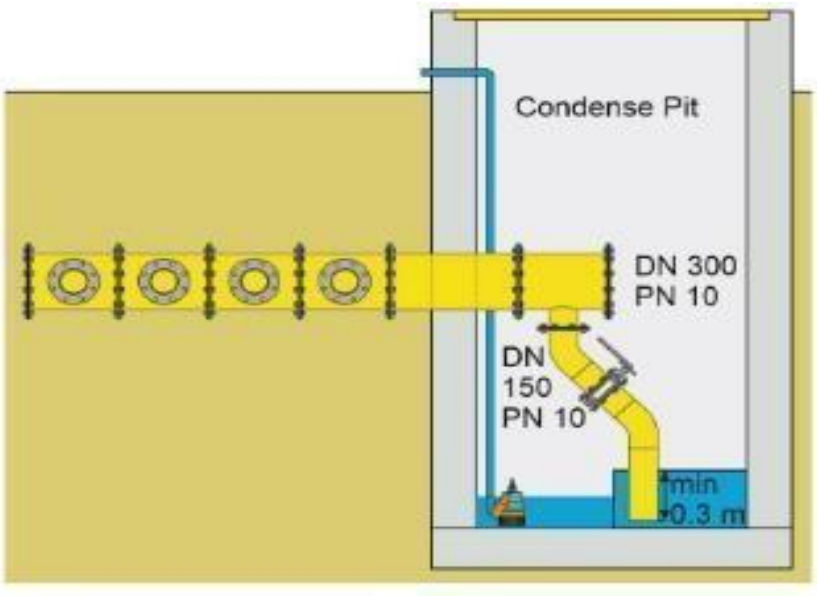
The Double-Membrane-System is proposed where high and variable gas flow rates are expected. It also prevents uncomfortable heat loss and intake from the digester top. From Middle Pillar, inside the digester, there are Belts tied to the wall crown, andon top of that a safety net is fixed. This is the support structure for the Double Membrane Biogas Balloon Roof itself. For any maintenance inside digester, the roof can be opened and closed under the guidance of an authorized service workforce, subject to provision of professional safety assessment before hand. All the three digesters are of the same design, and also have equal size of biogas capturing system.They are interconnected through pipes at the upper gas storage area to have almost equal gas pressure, even if the gas generation might be different, though they can be separated by valves. Safety Valves are fitted, to prevent over- and under-pressure conditions. Filling level, and limitations are also monitored by digital and analog filling level indicators, and Over- and Under-pressure Sensors, which are also connected to PLC.

PLC, Monitoring & Automation

The entire biogas generation plant, with allits actuators, and monitoringinstrumentation is controlled by a plantautomation system with PLC & DCS (Programming Logical Controller & Distributed Control System). The biogas generation plant is operating under standardized conditions & by modularized designed components with integrated consumers/actuators (as mixers, pumps, pneumatic valves, etc.), monitoring sensors& auto-switches (as temperature sensors, pressure sensors, level control, PTC- thermistor switches, PIS-sensors, flow meter, CAP-sensors, etc.) as per requirement. An integrated visualization screen allows the fast access to all required data.

Condensate pit with Safety system

The generated Biogas will be supplied to the gas cleaning system. As it is saturated with humidity, any temperature drop in the connecting pipeline will cause condensed water to fall out, which will be diverted to a condensate pit. The same is placed at the lowest point in the biogas supply pipeline on its way to the Upgradation. Also, at this point any risk of biogas leakage is avoided by design, with safety factor above five with syphon drain, and an additional maintenance valve.



Condensate pit with safety system

BioGas Flare

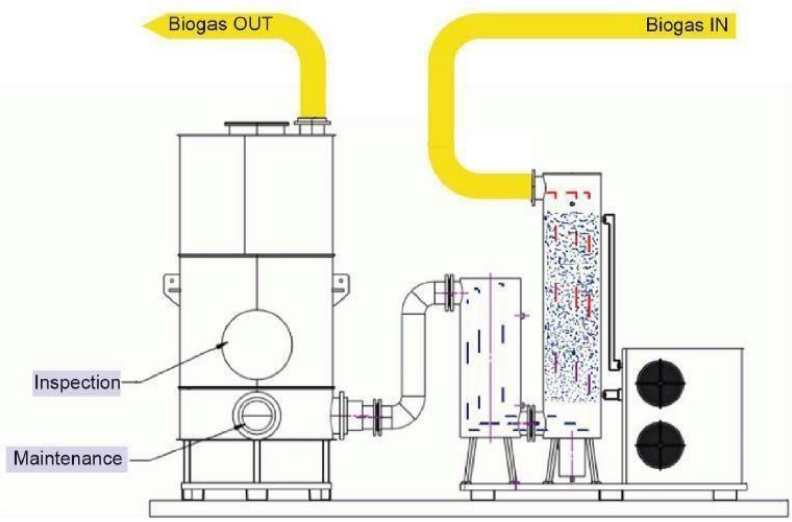
In the event of surplus Biogas generation, the surplus biogas is sent to Flare, for safe disposal, to a stand-by Biogas flaring unit. The same will combust the biogas in a controlled and safe manner, to avoid Methane emission into atmosphere.

Gas Flow Monitoring and Metering

To control the biogas generation and the efficiency of the Upgradation, a calibrated Biogas Flowmeter is installed after suction pressure equalization. It is especially designed to measure standard volume flow of biogas, based on ultrasonic measurement in combination with temperature and pressure sensors. In a wide flow range and to a large extent, it isindependent of gas density, composition, saturation, or even condensed water content.

BioGas Dehumidification and De-Sulphurisation

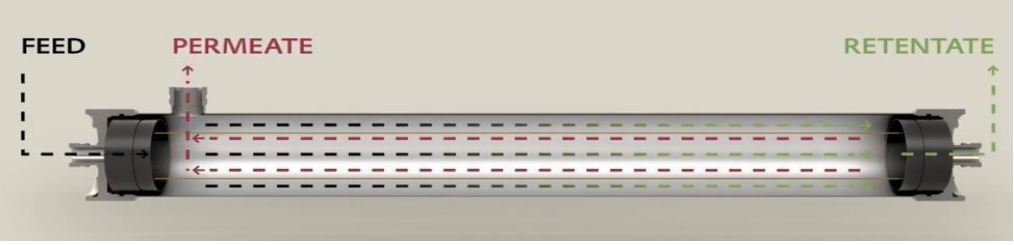
Biogas usually has a saturated water vapor content. In case of condensation, this water can react with the H2S present in the natural biogas, which is not only highly corrosive, but also a serious drawback for performance of any gas upgradation system. It also leads to very high service and maintenance costs.



Dehumidification and De-Sulphurisation

Removing water vapor by a dehumidification process significantlyimproves performance, life span, and reliability of the Upgradation unit. The **Biogas Dehumidification System** consists of two columns. In first column, the gas gets cooled down with a cold-water circuit, propelled by an industrial cooler, so that the condensed water falls out, and will be rejected by a level-controlled siphon. In the second column, the gas gets re-heated, to bring it above dew point, before it enters with controlled humidity into a Carbon Filter for H2S removal. The **removal of Hydrogen Sulphide(H2S)** from biogas with activated carbon requires a thin water layer in the carbon pore structure with its mesopore and macropore cavities, to promote the reaction between H2S and the carbon surface. The optimal relative humidity is 60-70%. This is ensured with the upstream connected De-Humidification System. For best results, also an optimum oxygen quantity of 4 times the H2S concentration (molar basis) is advisable. Sulphur loaded activated carbon has a high value as Fertilizer component and after replacement with fresh one, it can be used for enrichment of the plant's slurry, and in that way for production of solid organic Fertilizer compost.

BioGas Upgradation



BioGas Purification System

The method by which the biogas mixture gets purified, is a **Polymer based Membrane Gas Separation** system, at firstsight the Membrane bundles look like to be a bunch of Spaghetti strands or a paint brush. In fact, they are highly selective membrane tubes made up of multiple cylindrical polymer hollow fibres. These are used in the hollow fibre membrane.

TheMembrane tubes are made from a high-performance polymer with very high temperature and pressure resistance. This plastic gives the membrane the property of distinguishing particularly effectively between methane and CO2, allowing the raw gas to be purified to more than 97 percent methane. Gas molecules are of different sizes and have different solubilities in polymers. The biogas to be cleaned is introduced under high pressure at one end of the membrane. The CO2 molecules are smaller than the methane molecules and also more soluble in polymers. As a result, they pass through the micropores of the membrane much faster and are separated from the methane. CO2, water vapor, and traces of ammonia and hydrogen sulphide are drawn off at the low-pressure side, whilethe methane collects at the other end of the membrane, the high-pressure side. In case of Cascade filling, the power consumption and capacity of High-pressure Compressor will also be significant lower as by other Technologies based on PressureSwing Adsorption (PSA) principle.

On-Line Gas Monitoring

For constant quality monitoring of BioCNG a Gas Analyzer System will be installed for analysis of the upgraded Biogas before compression. The Gas will be analyzed with online CH4, H2S and Moisture Sensor (Dew point meter). The Analyzer System consists of a fix installed Docking Station with integrated data logging as well as with connectors for over changing the measurement data towards the plant's automation system. By this, the constant quality of the BioCNG is ensured.

Methane Compression

The refined biogas sent to the Methane Compressor. The Compressor will be installed for compressing the purified biogas from 14 bar to 250 bar pressures and filling into cascades of cylinders. This Methane Compressor is of multistage reciprocating type, designedfor upgraded Biogas application.

BioCNG Cascade and Filling Station

For transfer of compressed BioCNG into the Cascade bundle of CNG-Cylinders, a BioCNG Cascade Filling station is serving. Customized for the site conditions, high-pressure stainless-steel pipes are connecting the Compressor station with precise manufactured tube face-flange fittings to three individual Cascade filling points, which are designed for filling the CNG Cascades. Acalibrated high pressure CNG Flow Meter is monitoring the gas flows. Individual safety valves, filling whips and quick-action hose couplings with top-hat sealing are supporting a safe filling process, up to 255 bar pressure, according to PESO approval.

CNG Flow Meter

BioCNG Storage System

The upgraded and compressed BioCNG storage cylinders (in cascades) are placed on specially designed trucks and brought to a fuelling station orat the customer site, where it can be distributed into vehicles or used for their application in furnaces. The cascades are made up of high strength stainless steel which can handle pressure up to 255 bar. The cascade of capacities 500 kg, 400 kg and 100 kg are used for transportation at the customer end. Each cascade comprises of 40 cylinders each, with a capacity of 10.5 kg at 250 bar. At customer site, PRS system will be installed which again reduces pressure to 1 bar.

The layout of the plant has been attached as Annexure-I

The Process Flow Diagram is attached as Annexure-II

2.3 Desk-based Assessment

To identify the sensitive receptors around the project site, a 10 km buffer was considered for mapping to review secondary data. Preliminary desk-based assessment was undertaken for the project area in order to:

- Identify presence of any eco-sensitive sites, sanctuaries, reserved forests and/or wildlife areas within 10 km radius of the Project components to assess any critical ecological issues of concern and any impacts from the asset to local ecological and biological system.
- Identify water bodies and streams and any related impacts
- Identify presence of indigenous communities / Schedule V areas across the Project components and evaluate any impacts from the asset operations/ activities and.
- Evaluate possible risks arising from natural hazards such as earthquakes, floods, cyclones etc.

Recommendations related to any identified impacts have been provided under each sub-section.

Land Use Land Cover (LULC) was extracted for the study area from World Cover, a global 10m baseline product, based on the Sentinel-1 and 2 data. The distribution of various land cover in the 10km radius of project site is stated shown in **Figure 2-1**.

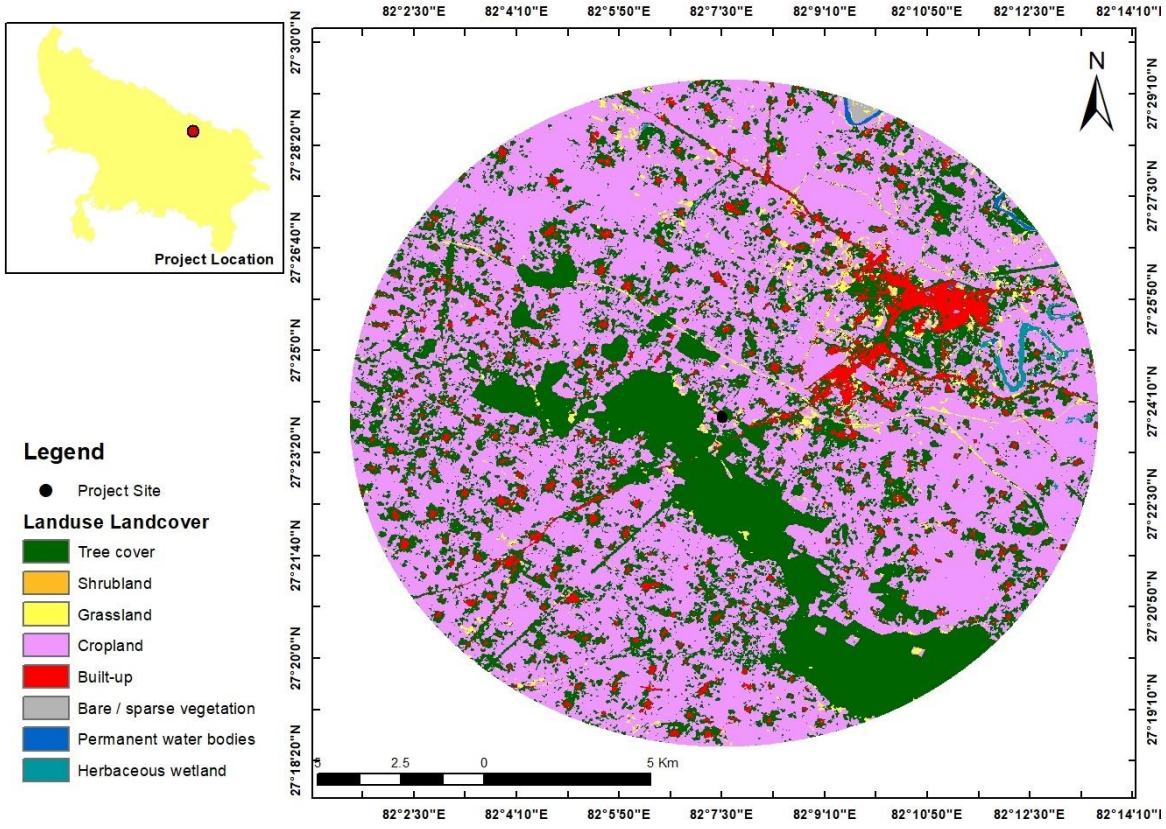


Figure 2-1 Landuse landcover of Balrampur Site

The distribution of various land cover in the study area reflects that about 32% of the area is covered with tree cover due to proximity with Kuwana Reserved Forests which is lying 550 meters south west of the plant site is complimented by teak plantation around its borders. The next dominant land use

in the study area is Cropland which is about 60%. The built up in the area is less than 5%. Less than 1% permanent water bodies are present in the study area (0.16%).

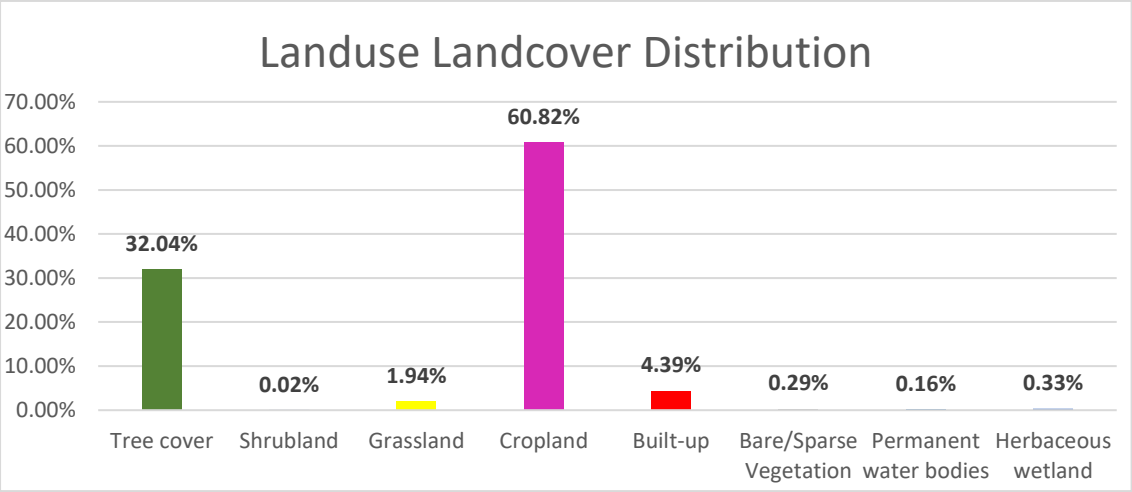


Figure 2-2: LULC Analysis

Proximity of project to sensitive receptors:

Sensitive Receptors	Remarks
Municipal Dump Site/ Hazardous Waste Landfills (Within 10 km of municipal waste dump sites / hazardous waste landfills)	There are no municipal dump sites or hazardous waste landfills within 10 km of the proposed project site.
Critically/Severely Polluted Area (Within 10 km of Notified Critically/Severely Polluted Areas)	No Critically or Severely Polluted area (classified by Central Pollution Control Board as per Revised CEPI Concept and directions issued in April 2016) are there within 10 km of the project site. The risk of pollution exposure to the project is negligible.

Sources of pollution around the project location:

There are no major industrial units within the immediate vicinity of the project. Two (2) warehouses could be observed.

2.3.1 Protected Areas and Ecological Important Habitats

1: 50K Open series Toposheets were procured from Survey of India to identify Reserved forests in the study area. The nearest protected areas to the site location are Kuwana Reserve forests falling within the Study area that can be directly impacted by the project.

2.3.2 Places of Cultural Heritage and Archaeological Importance

No areas protected under international conventions, national or local legislation for their ecological, landscape, cultural or other related values were found within the 5 km study area. There are no World Heritage sites, excavations, or Museums present in the study area.

2.3.3 Drainage

Drainage and the order of streams has been derived from the 30m resolution Digital Elevation Model in Q-GIS. Permanent water bodies were derived from Open Streets Maps database.

As per Block-wise Ground Water Resources Assessment 20223 report of the Central Ground water Board, Balrampur block falling in Balrampur District is categorized as 'Safe'. No fourth order stream cut across the project site.

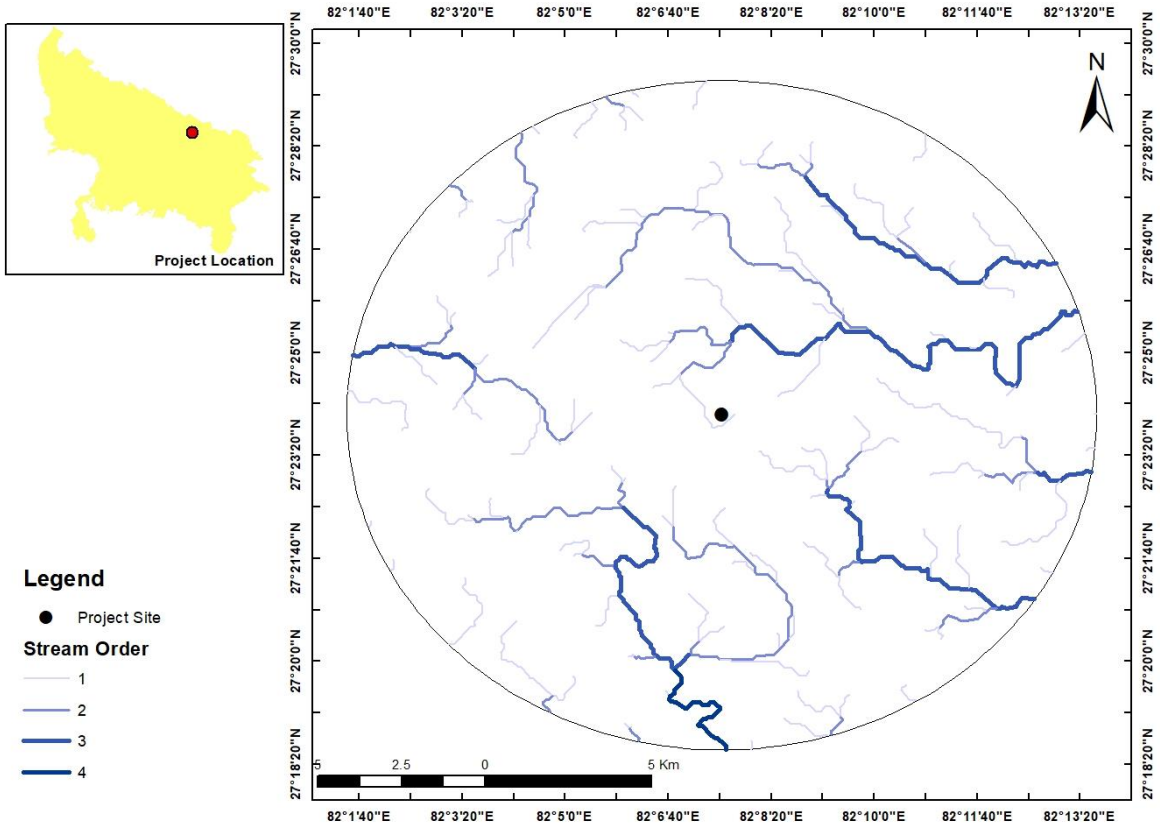


Figure 2-3 Stream Network near Balarampur Site

2.3.4 Schedule Tribes

Study area is not located in any of the tribal district as per the list of fifth schedule areas. No indigenous communities were found to be present in close proximity to the project location which was confirmed during the visit (Refer **Table 2-1***).*

Table 2-1: State-wise list of Fifth schedule areas

State	Fully covered	Partially covered
Andhra Pradesh		East Godavari, West Godavari, Vishakapatnam, Srikakulam, Vizianagaram

[3] https://cgwb.gov.in/GW-Assessment/Categorization%20of%20Asssessment%20Units-GWRA2022.pdf as accessed on 28th December 2022

Chhattisgarh	Surguja, Korea, Bastar, Dantewada, Korba, Jashpur, Kanker, Balrampur, Surajpur, Narayanpur, Bijapur, Sukma, Kondagaon	Balod, Dhamtari, Raigarh, Rajnandgaon, Gariaband, Bilaspur
Gujarat	Dang, Dahod, Narmada, Tapi	Surat, Bharuch, Valsad, Vadodara, Panchmahal, Sabarkantha, Navsari
Himachal Pradesh	Lahaul & Spiti, Kinnaur	Chamba
Jharkhand	Ranchi, Khunti, Lohardagga, Gumla, Simdega, Latehar, West Singhbhum, East Singhbhum, Saraikela, Kharsawan Dumka, Jamtara, Sahebganj, Pakur	Palamu, Garhwa, Godda
Madhya Pradesh	Jhabua, Mandla, Dindori, Barwani, Alirajpur	Dhar Khargone (West Nimar) Khandwa (East Nimar) Ratlam, Betul, Seoni, Balaghat Hoshangbad, Shahdol, Umaria, Sheopur, Chindwara, Sidhi, Anooppur, Burhanpur
Maharashtra		Thane, Pune, Nashik, Dhule, Nadurbar,Jalgaon, Ahmednagar, Nanded, Amravati, Yavatmal, Gadchiroli, Chandrapur
Orissa	Malkangiri, Nowarangpur, Rayagada, Mayurbhanj, Sundargarh, Koraput	Sambalpur, Keonjhar, Khandhamal, Kalahandi, Balasore, Gajapati, Ganjam
Rajasthan	Banswara, Dungarpur	Udaipur, Sirohi, Chittorgarh
Telangana		Adilabad, Khammam, Mahbubnagar Warangal

2.4 EHSS Organization Structure and Responsibilities

EverEnviro is responsible for overall project monitoring as well as implementation of regulatory requirements across project operations. EverEnviro has appointed one (1) Plant Head, one (1) EHS Head, one (1) Admin/HR Head, one (1) Store head and two (2) Operations Staff (one each for overseeing civil work and press mud handling) at the site. The company also appointed one (1) chemist. The company has outsourced project works (civil and mechanical) to Thermax Limited and further subcontractors. There are two subcontractors engaged on the project currently: Raj Construction (civil), and Skylark Cagers India Private Limited (security).

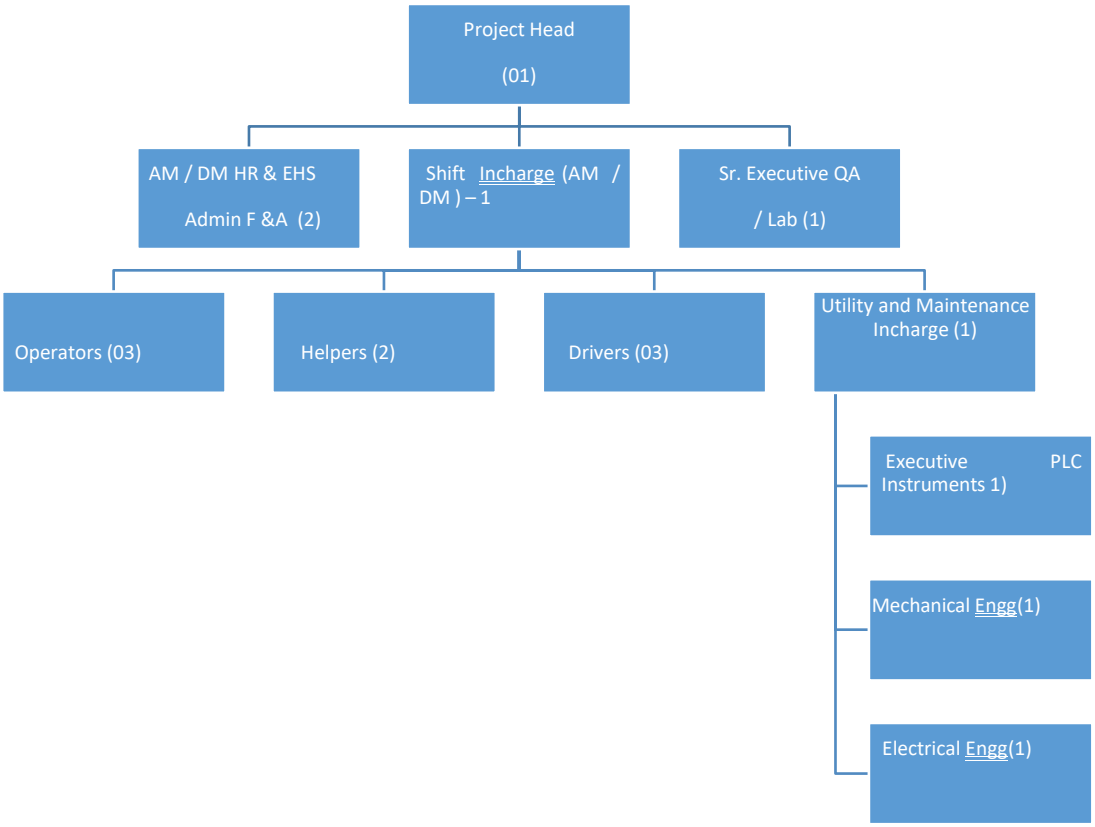
As per the Contract Agreement of EverEnviro Resource Management Private Limited with EPC Contractor Thermax Limited, the contractor and further subcontractors are primarily responsible for the implementation of EHS aspects on site. Individual contractors and subcontractors are responsible for OHS and Welfare of the workers.

The Safety Officer of Thermax Limited reports to the EHS Head appointed by EverEnviro and is responsible for implementation of site safety requirements. During the audit visit, the newly appointed contractor's safety officer was not present at site. Thermax Limited has developed an occupational health, safety, and environment (OHSE) policy and procedures for site safety. This policy has been reviewed and approved by EverEnviro. The Safety Officer of Raj Construction report to the Site-in-charge of Thermax Limited. All the Safety Officers are responsible for compliance with the OHSE policies and procedures.

Contractor Thermax Limited has appointed one (1) Admin/Store/Accounts Officer. The Admin/Store/Accounts Officer reports to the Admin/HR Head appointed by EverEnviro and is responsible for monitoring and complying with worker welfare requirements and maintaining worker records. The contractor has also appointed two (2) Operations Staff (one each for overseeing civil work and stores). During the audit visit, there were approximately 35 workers working on site.

The sub-contractor Raj Construction has appointed one (1) safety officer as mentioned above. In addition, the sub-contractor has also appointed two (2) supervisors, one (1) senior engineer, two (2) junior engineers, one (1) surveyor, and one (1) accountant.

Organizational Structure and Manpower Requirement of the Plant



Proposed Organizational Structure

Operation and Maintenance Plan

S.No.	Designation	Qualification	Experience (Yrs)	Nos
1	Project Head	Masters in Environmental Sciences/Bio-technology	10	1
2	Manager Operations	Chemical Engineering	8	1
3	HR & Admin F&A Officer	Graduate	5.-8	1
5	Electrical / Utility Engineer	Graduate/Diploma in Electrical Eng	5-6	1
6	Shift In charge	Graduate/Diploma in Mechanical Eng / Ele / Instrument	4	1
9	Operators	Intermediate/ITI	3.-5	3
10	Mechanical Fitters	ITI	3.-5	1
11	Electricians	ITI	3.-5	1
12	Helpers	Intermediate / High school	0-5	3
13	Drivers	HV DL	3.-5	3
14	Security	Supervisor - Ex service man		
15	EHS Person	Manager / Asst.Mnager	7-8	1
			Total	17

2.5 Existing Environment and Social Management System

Environmental Management during Construction Phase

Environmental Aspects and Impacts during Construction Phase

S.N	Component	Aspect	Potential Impact
1	Air Quality	Dust emissions from site preparation, excavation, material handling and other construction activities at site.	Minor negative impact inside plant premises. No negative impact outside plant site. Short term
2	Water Quality	Surface runoff from project site Oil/fuel and waste spills. Improper debris disposal	No significant negative impact. However hazardous chemicals should be handled properly. Short term

3	Noise Quality	Noise generation from construction activities, construction equipment and vehicular movement	Minor negative impact near noise generation sources inside premises. No significant impact on ambient noise levels at sensitive receptors. Short term
4	Land Use and aesthetics	Land development	Positive impact. Development of integrated plant will increase the aesthetics of the area.
5	Topography and geology	Site development	No significant impacts
6	Soils	Construction activity leading to topsoil removal and erosion.	No impact.
7	Ecology	Flora and Fauna Habitat disturbance during construction activity	Impact will be there as the proposed project area is having vegetation.
8	Traffic pattern	Haul truck / construction vehicle movement	Minor negative Impact

Environmental Management Plan during Construction Phase

Environmental Management Plan (EMP) describes the process that an organization will follow to maximize its compliance and minimize harms to the environment. The Environmental Management Plan (EMP) provides an essential link between predicted impacts and mitigation measures during implementation and operational activities. EMP outlines the mitigation, monitoring and institutional measures to be taken during project implementation and operation to avoid or mitigate adverse environmental impacts, and the actions needed to implement these measures.

The likely impacts on various components of environment impacts due to the project activity during construction and operational phases have been identified and measures for their mitigation are suggested. The EMP lists all the requirements to ensure effective mitigation of every potential biophysical and socio-economic impact identified.

The EMP comprises a series of components covering direct mitigation and environmental monitoring and a project site restoration plan. Therefore, environmental management plan is prepared for each of the proposed developmental activities.

Environmental impacts during peak construction phase, will be mainly due to civil works such as site preparation, RCC foundation, construction etc.; material and machinery transportation, fabrication and erection etc.; storage and handling of different kinds of flammable/hazardous materials etc. The construction phase impacts are of temporary nature and localized phenomena, except the permanent change in local landscape and land use pattern at the project site and are expected to reduce gradually on completion of the construction activities. However, they require due consideration with importance during project execution and also wherever applicable

detailed protocol / procedures (in case of dismantling of existing units / infrastructure) shall be implemented to prevent / mitigate adverse impacts and occupational hazards.

Environmental management during Site Preparation

The site preparation and plant erection activities during construction phase will be carried out with proper preventive measures for pollution control as well as restoration of dismantled units / infrastructure and proper disposal of existing containments. At the time of civil works for proposed project units, it is necessary to control SPM levels through dust suppression methods.

Usually, preparation of site will involve excavation, site grading and stockpiling of backfill materials. Due care will be taken through slope stabilization to avoid water pollution problems during rainy season.

During dry weather conditions, it is necessary to control the dust emissions arising out of the excavation, levelling, transportation and stockpiling activities by proper water sprinkling.

Temporary tin sheets of sufficient height (3m) will be erected around the site of dust generation or all around the project site as barrier for dust control.

The top soil removed from construction areas if suitable, may be preserved to reuse for development of land-scape and horticulture in the later part of construction phase. Any excess soil will be disposed as per the C&D Waste management Rules-2016 after obtaining the permission from the authorities.

Tree plantations around the project boundary will be initiated at the early stages by plantation of 2 to 3 years old saplings using drip irrigation or by regular watering so that the area will be moist for most part of the day. While designing the development of landscape proper care will be taken so that no alien species will be introduced and only site specific plantations shall be carried out. Proper care will be taken to avoid any adverse environmental impacts during the construction phase.

While designing the drainage system proper care will be taken so that natural drainage system will be utilized as far as possible.

All vehicles carrying raw materials will be instructed to cover with tarpaulin / plastic sheet, unloading and loading activity will be stopped during windy period.

All construction materials and products will be stored in a proper shed or using coverage so that fugitive emissions will be less.

Amenities for Construction labor

The work force during construction phase would be around 35-40.

The manpower required for these activities should preferably be employed from nearby areas so that avenues of employment will be open to local people.

The construction work force may also required to be temporarily migrated to the project site, some may be with families. Sites for construction and workers camp should be clearly demarcated to prevent occupational hazard.

Occupational Health and Safety

The Organization shall take due care to include necessary clauses in respective construction tender / work awards for maintaining strict compliance of occupational health standards for workers during duty period including provision and usage of personal protective equipment (PPE) to mitigate occupational health hazards.

If necessary, the personnel working in poorly ventilated work places will be provided with respiratory protective equipment. Fire hazard safety norms are required to be strictly followed.

Adequate security arrangement will be made to ensure that the local inhabitants and the stray cattle are not exposed to the potential hazards of construction activities. Round the clock security personnel will be appointed to restrict entry of unwanted people to the site.

The movement of heavy equipment should be done with proper precaution to prevent any accidents on the road. Occupational risk should be minimized at the project site through safety measures. Movement of vehicles with 20-40 km/hr imposed speed limits on internal roads will reduce risks of accidents or injuries.

Safety training will be provided to all construction workers on operation of equipment. Security will also be extended during non-working hours to ensure there is no uncontrolled access to the machinery and equipment.

The organization will be vigilant to detect workers showing symptoms of communicable diseases. All illness and incidents will be reported and recorded. First Aid boxes will be provided at the appropriate locations and necessary training will be also provided at regular intervals.

Management of Environmental Impact from operation of Construction Equipment

Both diesel and gasoline powered construction machinery, vehicles etc. put in to operation at project site will be properly maintained to minimize exhaust emissions as well as noise generation

Efforts will be made to prevent accidental spillage of any oil / grease from construction equipment maintenance activities, and empty containers, rubber & plastic materials etc generated during construction is expected to be properly disposed off and other solid wastes generated during the construction phase will be disposed as per the existing statutory regulations.

Though the effect of noise on the nearby inhabitants due to construction activity will be marginal, major noise prone activities will be restricted to only daytime

The construction machinery will be maintained properly to minimize the noise generation.

Safe Storage of Hazardous Materials

Inflammable materials such as petrol, diesel, lubricating oil, compressed gases, paint and varnishes as also explosives for blasting operations, if required at the construction site will be stored and handled strictly in accordance with the prevailing safety regulations.

Air Pollution Management during construction phase

During the construction phase, chronic gaseous emissions are expected from the heavy machineries deployed for construction. All other emission sources are intermittent and include emissions from heavy vehicles. Some generic measures to reduce fugitive and gaseous emissions during construction phase will include the following:

- Water sprinkling on main haul roads in the project area will be done, this activity will be carried out at least twice a day, if need arises frequency will be increased on windy days.
- Those sections of the working area that are being frequently used by vehicles will be damped by controlled application of water sprays (e.g. by water dowsers) as conditions dictate.
- All vehicles meant for loading / unloading of construction materials to the site or removing soil / debris will be enclosed and covered to prevent escape of dust
- Vehicles or equipment will be checked against stipulated norms for pollutant emissions
- Exhausts of other equipment used for construction (e.g. generators) will be positioned at a sufficient height to ensure dispersal of exhaust emissions and meet the standards set by CPCB
- Engines and exhaust systems of all vehicles and equipment will be maintained so that exhaust emissions do not breach statutory limits (set for that vehicle / equipment type and mode of operation by CPCB) and that all vehicles and equipment are maintained in accordance with manufacturers' guidance
- Dust masks will be provided to construction workers, while carrying out operations that may entail potential for dust inhalation.
- Construction materials stored will be covered with proper covers during transportation, storage to control the fugitive emissions as per statutory regulations.

Noise Management during construction phase

The following measures are recommended to mitigate adverse impacts on noise environment during construction phase:

Personal protective equipment like earmuffs, helmets covering ears should be provided to the onsite workers, working near noise generating equipment and should be seen that, workers use the protective gadgets regularly.

Earth movers and construction machinery with low noise levels should be used

Periodic maintenance of construction machinery and transportation vehicles should be undertaken.

Water and Wastewater Management

Sources of Water

The water required for construction purposes will be locally sourced from authorized vendors. The drinking water requirement will be met from packaged water / water transported through tankers to the construction sites. Construction laborers should be provided with adequate quantity of drinking water of potable quality.

Water demand during construction shall be reduced by use of curing agents, super plasticizers and other best construction practices and treated water from Sewage treatment plants shall be used.

In case ground water is used during the construction or operational phase, necessary statutory permissions will be obtained.

Mitigation Measures for Prevention of Water Pollution

Sufficient and appropriate sanitary facilities will be provided in order to maintain hygienic conditions in the rest rooms of construction labourers. The domestic wastewater generated from temporary toilets used by the work force will be diverted to septic tank followed by soak pit. Therefore, impact on water quality due to proposed unit would be insignificant.

The solid waste generated should be collected and disposed off in an appropriate manner. The existing workshop areas at the complex should be used for the maintenance of vehicles and construction machineries so as to avoid accidental spills of oil/oily wastes. The waste generated from the site work shop will be segregated like used oil, lubricants, etc and disposed to authorized recyclers.

EMP During Operation Phase

Air Pollution Sources and Mitigation

The main activities from the proposed project which cause air pollution are, dust particulates due to movement of vehicles and road sweepings, temperature & Odour from Processing areas.

The following measures are recommended to mitigate adverse impacts on air environment:

Air Pollutions of DG Set

Diesel power generating sets as source of backup power for lifts and common are illumination should be of enclosed type and conform to rules made there under Environment (Protection) Act 1986, prescribed for air and noise emissions standards are as per CPCB guidelines. Exhausts should be discharged by stack raised to 4 meters above the rooftop.

As much as possible the fuel requirement of all power generating equipment should be replaced with renewable natural gas instead of diesel.

All the DG sets are installed within acoustically treated DG rooms located in basements and conforms rules made under Environment (Protection) Act 1986, prescribed for air and noise emission standard as per CPCB guidelines.

The stack height of DG set should be 4 meters above the roof level and 11 meters from the ground level. meter above the ground level.

Emissions from new diesel engines used in generator sets have been regulated by the MoEFCC, Government of India**.**

Stack Emission will be tested and certified by an external agency every six months. The DG set will be calibrated from the manufacturer in case any deviation in the emission parameters.

Emission limits for new diesel engines ≤ 800 kW used in genset applications were set in 2002 and strengthened in 2013.The regulations also set noise limits for diesel generator sets up to 1000 kVA.

Air Pollution of Storage Feed Stick Section

The unloading, storing and processing of the press mud would generate dust and odors. Unloading of feed stocks from dumper trucks will be carried out into a specially designed in-feed bunker system. These activities will be carried out under fully covered areas with proper ventilation.

Air Pollution in the Bio-Methanation Process

Regular monitoring of scrubbing system for purification of biogas provided by the equipment vendors prior to compression / Cascading should be done to ascertain for absence of SO_2 emissions.

Ambient air quality with respect to PM_{10}, $PM_{2.5}$, SO_2, NOx, Ammonia, VOC's and CO should be monitored regularly at different sampling stations selected in consultation with Municipal Corporation and SPCB within the impact zone. The sampling stations should be selected based on the maximum ground level concentration anticipated and keeping maximum stations in the downwind direction and at least one in the upwind direction.

A weather monitoring station shall be operated continuously and regular data logging shall be done

Proper moisture, oxygen and C:N ratio shall be maintained to minimize the odour and to maintain adequate temperature in compost plant

Green belt shall be provided along the internal roads and plant boundary and 33% of the overall plant area will be maintained under the plantations.

To control fugitive emissions of VOCs / Odors, **Bio-Scrubbers** will be provided and following steps shall be taken:

- Provision of internal floating roof tanks with flexible double seal for storage tanks

- Provision of mechanical seals in pumps
- Regular inspection of floating roof seals and proper maintenance of floating roof seals for existing tanks
- Preventive maintenance of valves and other equipment
- Fugitive emissions monitoring at regular intervals
- Strengthening / Maintaining existing plantation
- Use of high grade gasket material for packing
- Implementation of Leak Detection and Repair (LDAR) program using a portable VOC detection instrument

Inventory of odorous compounds should be maintained and release of such compounds due to leakages should be prevented by following strictly the relevant guidelines for storage and handling of such materials.

Gas powered or low sulphur diesel and unleaded petrol in conventional vehicles may be used within the project area.

Idling of vehicles should also be minimized during transport and handling activities

Loading / unloading and storage areas should be paved to reduce dust emissions

All access roads (internal as well external) to be used by the project authorities shall be covered either with concrete or bitumen to suppress the dust generation along the roads

Emissions from individual stacks, particular matter from windrow formation should comply with the emission standards stipulated by MoEFCC / CPCB for proposed units.

Ambient Air Quality

Ambient air quality is defined as the quality of air outside and sometimes inside. Air Pollutants means any solid, liquid or gaseous substance (including noise) present in the atmosphere in such concentration as may be or tend to be injurious to human beings or other living creatures or plants or property or environment.

Air quality monitoring is the process of assessment of pollutants present in atmosphere by their quantity and types as per air quality standards. Air quality monitoring helps us to take action based on pollutants present in atmosphere to improve air quality.

In order to arrest the deterioration in air quality, Govt. of India has enacted Air (Prevention & Control of Pollution) Act in 1981. The responsibility has been further emphasized under Environment (Protection) Act, 1986.

An In-House Ambient air quality monitoring station is setup within the plant premises which provides following parameters on-line. The National ambient air quality standards (NAAQS) have been established for six “criteria” or major of outdoor air pollutants: lead, carbon monoxide, ozone, nitrogen dioxide, sulfur dioxide, and particulate matter.

Sources of Fugitive emissions affecting work environment & Ambient Air Quality

Major air pollution generating sources in the RNG Plants are:

- Loading & Unloading activities of feed stock in the dumping areas and feeding into machineries.
- Incoming / outgoing vehicles
- Due to machinery used in handling waste operations

Mitigation Measures to reduce Fugitive emissions affecting work environment & Ambient Air Quality

1. Areas to be earmarked for unloading of feed stock.

2. A sheet cover over all the incoming/outgoing vehicles carrying waste/finished products.

3. Abatement of Dust from Vehicle Movement

Dust abatement due to transport activities arising due to vehicles movement (operation of vehicles within, entering or leaving the site) can also include the following:

- Transportation of solid wastes should be done in covered vehicles to prevent fugitive dust emission.
- Regular checking and maintenance of vehicles should be ensured (valid PUC)
- Earmark areas for parking vehicles.
- Parking should be only within the premises and not outside of the project site earmarked.
- Smooth movement of incoming & out going vehicles / trucks.
- Roads within plant premises must be tarred or concretized.
- Weigh bridge should be operational all the time.
- The speed limit within the premises should be 10km/hr.

4. Dust abatement from machinery used in the operations

The latest NAAQS standard defined by CPCB.

Ambient Air Quality Monitoring

It is necessary to assess the present and anticipated air pollution through continuous air quality survey/monitoring programs. It is therefore stated that both legally and ethically all industries should assess their air quality standards in and around the plant locations.

Ambient air quality monitoring is carried out so as to generate data that meets the objectives of monitoring. Ambient air quality monitoring program are needed to determine the existing quality of air, evaluation of the effectiveness of control program and to develop new program.

The ambient air quality monitoring network involves measurement of a number of air pollutants at number of locations at the site so as to meet objectives of the monitoring. Any air quality monitoring network thus involves selection of pollutants, selection of locations, frequency, duration of sampling,

sampling techniques, infrastructural facilities, man power and operation and maintenance costs. The network design also depends upon the type of pollutants in the atmosphere through various common sources, called common urban air pollutants, such as Suspended Particulate Matter (SPM), Respirable Suspended Particulate Matter (RSPM), Sulphur dioxide (SO2), Oxides of Nitrogen (NOx), and Carbon Monoxide (CO) etc. The areas to be chosen primarily are such areas where machinery operation, emission source, public complaints if any and the land use pattern etc. Generally, most of the time the basis of a network design are the pollution source and the pollutant present.

Procedure to Conduct Ambient Air Quality Monitoring:

- **Ambient Air Quality** Monitoring should be done at an interval mentioned in the CTE/CTO/EC from the reputed NABL accredited lab facility.
- Method of sampling should be as per IS-5182(P-14) as given in the CPCB direction.
- **Ambient Air Quality** Monitoring for Waste to Energy plants should be done for at least five basic parameters like PM, NO_x, Sox, HCL and CO.
- **Ambient Air Quality** monitoring and Sampling should be done as per the procedure mentioned in the latest guide lines for Ambient Air Quality Monitoring issued by pollution control boards. The frequency of **Ambient Air Quality** monitoring shall be as per the latest guide lines, however in general **Ambient Air Quality** monitoring shall be done at least twice a year.

Water Pollution Sources and Mitigation Measures

Sources of Water

The water requirement for domestic and process will be supplied by the municipal corporation. Proper connection will be obtained from the Jal board or water supplying authority and water consumption will be recorded using the ultrasonic water meters and log books will be maintained. In case bore water inside the plant premises is used, necessary statutory approvals will be obtained from the concerned authorities.

Waste Water Sources and Treatment

The plant will have a zero liquid discharge system and will not discharge any liquid to the environment in any form.

Zero liquid discharge (ZLD) is a strategic wastewater management system that ensures that there will be no discharge of industrial wastewater into the environment. It is achieved by treating wastewater through recycling and then recovery and reuse for industrial purpose.

Domestic Waste water will be treated through Septic tank / Sump pit.

Performance evaluation of effluent treatment plant should be undertaken at regular intervals for all relevant parameters covered under this study.

Storm water drainage system shall consists of well-designed network of open surface drains and rainwater harvesting pits along the drains, so that all the storm water is efficiently drained off without any water logging. The storm water drain is will be separate and free from the effluent/waste water at any point of time.

Rain Water harvesting will be planned and implemented from the construction phase itself. Rain Water harvesting pits will be constructed and rain water is diverted to the drain wells.

Solid Waste Management

All hazardous waste generated will be segregated as per its category and be stored, handled and disposed off as per Hazardous waste (Management & Handling) Rules, 2016.

E-waste generated within the premises will be used properly, collected and disposed off/ sent for recycling as per the prevailing statutory guidelines/rules of the regulatory authority as per E-Waste Management Rules 2016.

Management of Rejects from the Plant.

The Rejects from the plants from the plant is mostly inert from the material recycling facility which will be disposed in the sanitary land fill site. The quantity of rejects sent to sanitary land fill site should be recorded in a separate register including truck details, date, time etc.

The sludge shall be removed from the leachate / Effluent treatment plant periodically. The sludge should be tested periodically and based on the test report, it should be appropriately disposed off.

The quantity of sludge recovered should be recorded and submitted to the SPCB through environmental statement submitted annually.

Noise Pollution

Sources of Noise Pollution

1. Due to Vehicle movement:

Due to vehicular traffic and material transportation within applied area.

Noise abatement measures:

- Regular checking and maintenance of vehicles should be ensured (valid PUC)
- For long distance transportation overhaul routes to be judiciously selected.
- No parking outside the plant premise.
- Earmarked areas for parking vehicles within premise.
- Smooth movement of incoming & out going vehicles / trucks.
- Roads within premise tarred.
- Minimum use of horns.
- Operational Weigh bridge

2. Noise due to heavy earth moving machinery /crushing deployed.

Noise abatement measures

Noise Pollution control of DG Set

Noise abatement measures for diesel generator sets:-

- Noise from DG set shall be controlled by providing an acoustic enclosure or by treating the room acoustically
- The acoustic enclosure or acoustic treatment of the room shall be designed for minimum 25 dB (A) insertion loss or for meeting the ambient noise standards, whichever is on the higher side (if the actual ambient noise is on the higher side, it may not be possible to check the performance of the acoustic enclosure/acoustic treatment. Under such circumstances the performance may be checked for noise reduction up to actual ambient noise level, preferably, in the night time). The measurement for Insertion Loss may be done at different points at 0.5 m from the acoustic enclosure/ room, then averaged.
- The DG set shall be provided with proper exhaust muffler with insertion loss of minimum 25 dB (A).
- These limits shall be regulated by the State Pollution Control Boards and the State Pollution Control Committees.

Noise abatement in Plant areas

- To control the noise regular preventative maintenance of equipment to be carried out. Regular and proper maintenance of noise generating machineries to avoid noise increase.
- Periodical monitoring of noise will be done to adopt corrective actions wherever needed.
- Ear plugs to be made available to workers during the operational hours.
- Besides the operators prepare Noise Mitigation Plan (NMP) which addresses: management and mitigation strategies to prevent an environmental nuisance caused by construction / demolition / recycling activities impacting ambient noise levels.
- Other initiatives include
    - Maintain records of equipment / machinery maintenance
    - Maintain records of monitored noise levels
    - maintain records of complaints on noise
    - Comply with Consent conditions issued by State Pollution Control Boards / PCCs and concerned authority
    - Plantation activities: Plantation reduces propagation of dust and noise.

Procedure for Noise Monitoring

1. Noise monitoring has to be done at the specified intervals mentioned in the CTE/CTO/EC.
2. Noise monitoring has to be done at the specified number of locations within the plant site as per CTE/CTO/EC.
3. Noise monitoring should be conducted by a NABL accredited lab.
4. Noise monitoring should be done prominently near the gate, Work environment, DG set and office blocks. The frequency of Noise monitoring should be as per the latest guide lines or as in general practice it should be done at least twice a year.

Occupational Health Management

There will be routine observation of health as certain sufferings are likely to appear as result of exposure by the workers during operations of various facilities. All the employees shall be required

to undergo a medical checkup before joining the facility. Medical checkup will be conducted on regular basis and the health conditions will be monitored. First aid facilities required to attend immediately for meeting emergency situations shall be made available at the facility.

Fire Protection System

The fire protection system will protect the entire site area from fire hazards happening accidentally.

This fire protection system comprises of a ground level water storage tank to store the anticipated requirement of water. One electric motor driven pump and one diesel high pressure pumps will be provided to pump the water to a high pressure header from where the water is distributed to various high pressure hydrants provided at selected locations. Necessary fire hoses terminated with spouts will be kept ready at each hydrant location to facilitate fire fighting. The header also caters to a multi fire system to automatically sprinkle water through sprinklers provided.

Development of Greenbelt

The main objective of the green belt is to provide a barrier between the source of pollution and the surrounding areas. The proposed greenbelt development should be of a suitable width along the periphery of plant and space between the units located within the plant, along the roads, the areas of unloading / loading and storage of feed stock and compost respectively

The green belt helps to capture the fugitive emission odours and to attenuate the noise generated apart from improving the aesthetics. Development of green belt and other forms of greenery shall also prevent soil erosion and washing away of topsoil, besides helping in stabilizing the functional ecosystem and further to make the climate more conducive and to restore water balance.

While making choice of plant species for cultivation in green belts, weight age has to be given priority to the natural factor of bio-climate. It is also presumed that the selected plants will be grown as per normal horticultural (or forestry) practice and authorities responsible for plantation will also make sure that adequate provision for watering and protection of the saplings exists at site.

The plant species will be selected so that their capacity to reduce noise and air pollution impacts is higher and providing food and habitat for local micro and macro fauna. The species which could not survive should be replaced by more tolerant species.

Criteria for selection of Plant Species

The plant species suitable for green belt development should be selected based on the following characteristics.

- It should have thick canopy cover
- They should be perennial and evergreen
- They should have high sink potential for pollutants
- They should be efficient in absorbing pollutants without significantly affecting their growth.
- It should be Indigenous

Social Impact and mitigation

It is revealed that the youth in the project area are devoid of employment opportunities. They can be a potential source of workers with minimum handholding and vocational education skills. Similarly, this would also trigger many direct and indirect benefits for economic advancement and social development of project area.

The proposed project would take a pivotal role in developing health, education, skill development, environmental management of the villages in the project area.

The socio-Economic status of the population in the project area shall be improved through CSR and focused community development interventions. Some of the salient activities are illustrated below:

Youth empowerment programs through awareness creation about various government schemes, providing appropriate opportunities with relevance to their qualification and skills, conducting skills inculcating programs etc.,

Social awareness program about the importance of conservation of local flora and fauna will be conducted periodically. The visitors and other inhabitants will be strictly warned to avoid throwing non-degradable waste materials in the project area, so that ecosystem should not get harmed.

Social welfare activities will be undertaken in collaboration with the local bodies and the information regarding the project activity and its plans. Social welfare program should be circulated in the form of booklets and shown as audio-visually.

In order to improve Socio-Economic status in slum area, will consider extending welfare measures to the local people under the community development program.

Periodical health checkup camps need to be conducted

Sensitization and awareness programs on child and mother health, sanitation and personal hygiene, HIV/AIDS etc.

Mother-child care awareness programs and need based health camps.

Veterinary camps and Para-Vet services to enhance the milk production of existing milk producing households.

A number of CSR activities can be initiated in the project area villages on convergence mode whilst partnering with exiting Government schemes and financial support from developmental institutions like NABARD.

The social impacts due to the proposed project is studied and given in 3 stages.

Impact during pre - construction phase
Construction phase
Operation phase

Impact during Pre-construction Phase

Land clearing, digging for construction activities etc will be performed during pre-construction phase of the project. Local labour force will get direct employment for this phase. During land clearing noise from machines and dust generation during clearing at the site will affect nearest residential areas at some extent.

Positive Impact in Construction phase

RNG (Renewable Natural Gas) plant construction Increased employment opportunities

Construction for RNG plant would encompass the following key activities removal of vegetation and general site grading, construction of administrative, control and other support buildings and Installation of utilities. These all type of works need manpower, local population will get employment opportunities in construction phase.

Increased business opportunities in local market

During construction of plant, local market will be benefited by supplying the raw material for the construction, Small hotels, shops will benefited by the project.

Public service and utilities

The proposed project will require infrastructural facilities e.g. Road, power, communication facility, water etc. will improve in the project area; these facilities will be a positive impact for the population living in surrounding villages.

Negative impact in construction phase

Increased transportation

For construction activity, loading unloading of material will increased transportation activities in the study area, heavy vehicles will use village road for transportation purpose it will increased load on village roads.

Impact on noise

Noise and vibration generated by road traffic, and other vehicles activities also cause nuisances to local people.

Positive impact in operation phase

Employment generation

In operation phase employment generation will help to increase contractual employment pattern in the study area.

Impact on village development

Plant will contribute in village development activities in the field of CSR, in needy areas development/welfare activities will performed

Negative impact in operation phase

Impact on transportation

In operation phase, loading unloading of material will increased transportation activities in the study area, heavy vehicles will use village road for transportation purpose it will increased load on village roads. In operation phase there will be increased transportation activities, transportation of material activities can disturbed day to day life of villagers

Mitigation Measures

Mitigation measures are presented below.

Construction of boundary wall

Before start any construction activity, boundary wall construction surrounding the plant site is needed to restrict the entry of children and animals.

Preference to local workforce in construction/operation phase

During construction and operation phase preference to local workforce will help to increase employment and income of surrounding villages

Proper provisions for labour during construction phase

During construction activities proper provisions like water, sanitation, rest room etc. Should avail on site.

Medical camps in surrounding villages (once in 3 months)

Arrange free ambulance service, medical camps in surrounding villages, free medicine distribution in medical camps.

Preventive measures to cover truck while transportation

During material loading unloading, transporting trucks should cover by sheets to reduce air pollution if any

Awareness program

Awareness of safety and environment through the plant authority for surrounding village.

Environmental & Social Governance (ESG) Cell

A full-fledged Environment and Social Management Cell needs to be established with multidisciplinary team of professionals, technical staffs and all necessary infrastructures; and the Cell is headed by Group Manager. This team will prepare the annual budget for implementation of Environmental Protection Measures along with item wise break up and obtain the approval for the same. The funds earmarked for the Environmental Protection measure shall not be diverted for other purposes. This team will be also responsible for all environment and social management

activities including environmental monitoring, greenbelt development, ensuring good housekeeping, ensuring statutory compliance as well as creating environmentally aware work forces in the facility including the proposed project.

The said team will be responsible for:

Monitoring and Analysis of air quality, noise levels, meteorology, water quality and other environmental parameters.

Implementation and monitoring of the pollution control and protective measures/ devices etc.

Co-ordination of the environment related activities within the project as well as with outside agencies.

Green belt development and creation of land and adequate funds for strengthening of existing and additional development.

Monitoring the progress of implementation of the environmental management program.

Undertake regular Environmental awareness programs to bring forth the beneficial aspects of the projects and environmental management measures being undertaken for improving the quality of life.

Compliance to statutory provisions, norms of State Pollution Control Board, Ministry of Environment Forests and Climate Change (MoEFCC) the conditions of the environmental clearance as well as the consents to establish and consents to operate.

Prepare, submit and upload various statutory compliance statements within the prescribed time limit and at appropriate points including the websites.

A report on the energy conservation measures conforming to energy conservation norms finalized by Bureau of Energy Efficiency will be prepared by this team incorporating details about the building material and technology, R&U factors and submit to the State Expert Appraisal Committee and a copy to SPCB in three months' time of obtaining the approval.

Submission of Monitoring Reports to SPCB/MoEFCC

As per the requirements, the status of environmental clearance stipulation implementation will be submitted to MoEFCC in hard and soft copy as per the prescribed period. The conventional pollutants will be monitored on monthly basis and reports will be submitted to SPCB, as per the requirements.

S.N	Environmental Component	Parameters to be Analyzed
1	Meteorology	Wind Speed, Wind direction, Temperature, Relative Humidity, Rainfall
2	Ambient Air Quality	Parameters as per MoEFCC notification 2009 on NAAQS
3	Fugitive Emission	PM, SO_2, NO_X, CO

4	Water quality of surface and ground water	Physical and chemical parameters as per SPCB norms
5	Liquid effluents	Parameters as per SPCB consent
6	Noise	Sound Pressure Levels (Leq) as per CPCB Guidelines

Compliance & Incident Reporting

Incident Reporting

Any environmental / Health and Safety /social incident shall be reported to the plant manager and Corporate ESG team by email or phone based on the severity of the incident. Based on the instructions, the corrective and preventive action (CAPA) shall be carried out. Progress of implementation of CAPA shall be periodically reported till its completion. The format of the Incident reporting will be as per the latest Solid Waste management Rules.

MIS

MIS report shall be sent to Corporate ESG team weekly and monthly.

Visit of MC, SPCB & Other officials

Scheduled visit of officials of MC, SPCB & officials shall be immediately informed to Corporate ESG team by email and phone as soon as the information is received.

Unscheduled visit can be informed to Corporate ESG by phone.

Plant personnel accompanying the external official should prepare a note and send the same to Corporate ESG team immediately after the visit.

External Reporting

Draft of any submission or reporting to MC or SPCB or CPCB will be prepared at least 10 working days in advance and sent to Corporate ESG team. After approval of Corporate ESG team it will be submitted to the concerned authorities.

Form-III will be submitted to the ULB/Local authorities in the prescribed format mentioned in the latest Solid Waste management rules before 30 the April of Every year. The format for FORM-III has been given in the Solid Waste Management Rules-2016.

Form-V will be submitted to the SPCB in the prescribed format mentioned in the latest Environmental protection act before 30 the September Every year. The format for FORM-V has been given in the Environmental Protection Act.

CTO & MSW Authorization Compliance report will be submitted to the SPCB every year before the date of CTO expiry or along with CTO renewal application.

The following reports need to be submitted to the various authorities

S.N.	Item to be submitted	To be submitted to	Last date
1.	Form-III as per SWM Rules, 2016	MC	30th April
2.	Form-V Environmental Statement as per Environment Protection Rules	SPCB	30th September
3.	Accident Report as per SWM Rules, 2016	SPCB	Only if accident occurs

2.6 Company and Project's Reputation in Public Domain on E&S aspects

A review of publicly available media sources through web search was conducted to identify any past issues of the Company on aspects related to environment, occupational health and safety, labor welfare and community welfare and safety. The review also included search for any ongoing or past NGO attention/campaigns, or items that may lead to reputational risks to the Company and/or Investors.

Keywords used for the search included EverEnviro, Indo Enviro, biofuel, CBG, stop work orders, NGO, controversy, issues, legal cases, social concerns, environmental issues etc. in various combinations. The review did not bring forward any issues on aspects related to environment, occupational health and safety, labor welfare and community welfare and safety.

3 Land Acquisition Procedure & EHSS Legal Requirements

3.1 Land Acquisition Procedure

SOP for Land Purchase and Lease Agreement

Ever Enviro follows a defined SOP / procedure to purchase land from the willing seller through negotiations and following a strict monitoring mechanism.

The SOP for land purchase and lease management helps Ever Enviro streamline its land-related activities, reduce risks, ensure legal compliance, and optimize its use of land assets. It also promotes transparency and accountability in the decision-making process, ultimately contributing to the organization's overall success and sustainability.

Land Requisitioning

- Land Parcel requirement will be gathered by the Head-Land Acquisition from the CCO & other CFT members basis the management plan to set up new plant/ Feedstock storage land.
- At the time of defining the complete specification of land parcel by the Head-Land acquisition, it is mandatory to refer the latest ESG guidelines with respect to setting up of new plant for Land acquisition/ Feedstock Land

Land Parcel Identification

- Land brokers should possess a good local reputation and reference of Sugar Mills, Village Sarpanch, mandatory experience in big land parcel dealing in past 3-5 years etc. Land brokerage charges and workorder will be prepared as per SCM SOP.
- Basis discussion with the Brokers and Landowners, prepare a consolidated list of Land parcel with clear details of Number of Landowners, land size, proposal for Lease/ Purchase, agreed for long term lease minimum 25 years. There should be minimum 3 options for Purchase or lease separately as per Management Requirement, exception to be separately approved from MD &CEO.
- Head Land Acquisition must diligently assess all land proposals by conducting an initial background check. This process involves collaborating with fellow brokers, seeking local references such as from Sugar Mills and regional employees, as well as consulting other reliable sources. Based on the findings, he can then decide whether to proceed with a physical site visit and request photocopies of pertinent land-related documents (Registration Documents). On need basis, Head Land Acquisition may also involve third party firm for end-to-end land acquisition process in consultation with the Executive committee.
- Land Team Acquisition will visit all Land parcel and submit visit report to Head Land Acquisition with the comments on specific parameters which are defined in the standard template.
- Head Land Acquisition is required to share an email to provide information about the land availability, option of Purchase/ Lease and tentative prices for Management decision. Prices are required to be cross checked with the Patwari, Circle rate, other brokers, reference from the recent land purchase/ lease rental in past 3 months and regional sources.

Internal Clearance

It is mandatory to have at least 3 options for Land Lease or Land Purchase. Else exceptional approval to be taken from MD & CEO

Management Approvals-Price Negotiation

Prices are required to be cross checked with the Patwari, Circle rate, other brokers, reference from the recent land purchase/ lease rental in past 3 months and regional sources.

Token Agreement, Due Diligence (Pre & Complete) and IC Approval

Token agreement with the farmers to be executed on Stamp paper (Stamp value to be determined in consultation with the Head Legal) with the individual Farmers. In case landowners are part of one family, then only one agreement will be executed with them. Token amount will be INR 50,000 maximum (Exception to be approved as per Payment DOA for Land) as token money. Agreement clauses will be provided by the Legal team. Payment to be approved as per Payment DOA within 3 days of submission and Accounts (RNG finance controller) will provide cheque within 2 days from the date of management's approval, to sign token agreement thereafter land team will sign token agreement with the owners.

The token agreement does not apply to storage land leased for a duration shorter than the plant land tenure without the need for Change of Land Use (CLU), as assessed by the Head Land and CCO. In such cases, only Pre-Due Diligence will be conducted instead of a complete due diligence.

IC approval Note is required to be prepared considering both the options a) availing stamp duty exemption b) without stamp duty exemption. IC approval is a parallel activity which will initiate post positive Pre- DD and it is required to obtain IC approval before getting complete Due Diligence report.

In the event that the IC does not grant approval, cease the complete due diligence process and proceed to re-initiate the land identification process in accordance with the recommendations provided by the IC

Stamp Duty Exemption for Purchase and Lease Option

Head Land Acquisition will apply for stamp duty exemption in case of Land purchase & Leased option as per state rules. In case of Bank Guarantee applicability, F&A team will be responsible to furnish the BG as per requirement

Land Registration/ Lease Rental Agreement

Template for Fund requirement should mandatorily include the maximum approved by the IC, details breakup of all the expense like stamp duty, farmer wise payment, brokerage with the timeline for payment. Parallelly, get the Work Order prepared from the Purchase team for Broker Fees basis Management Note as per DOA.

Registration of Storage land lease agreement will be the decision of CCO & Head Land.

Document Retention

Share all the original document with the Company Secretary for safe storage

3.2 Applicable EHSS Regulations

The national and state level (Uttar Pradesh) EHSS regulations applicable to the Company are listed below.

Applicable Regulation	Reason for Application	
Environmental		
1. Water (Prevention and Control of Pollution) Act, 1974; and Rules 1975	✓	The project generates wastewater and requires Consent to Establish and Consent to Operate from the SPCB.
2. Air (Prevention and Control of Pollution) Act, 1981; and Rules 1982	✓	The project operations generate air emissions and require Consent to Establish and Consent to Operate from the SPCB.
3. Construction and Demolition Waste Management Rules, 2016	✓	The project is in the construction phase and generated construction and demolition wastes.
4. Hazardous Wastes (Management, Handling and Transboundary Movement) Rules 2016	✓	The project operations generate hazardous waste and are required to obtain an authorization.
5. Solid Waste Management Rules, 2016	✓	The facility is classified as a 'waste generator' u/r 3(56).
6. The Uttar Pradesh Ground Water (Management and Regulation) Act, 2019	✓	The project has a bore well at site that is used for construction and sanitation purposes.
7. E-Waste (Management and Handling) Rules, 2016	✓	The facility classifies as a 'bulk consumer'' u/r 3(c).
Occupational Health and Safety		
1. The Building and Other Construction Workers' (Regulation of Employment and Conditions of Service) Central Rules, 1998 & Punjab Building and Other Construction Workers (Regulation of Employment and Conditions of Service) Rules, 2008	✓	The project is in construction phase and engages workers in various capacities.
2. The Uttar Pradesh Fire Prevention and Fire Safety Act 2005 and The Uttar Pradesh Fire Prevention and Fire Safety Rules 2005	✓	The facility is classified as an Industrial facility and is required to obtain a Fire Safety Certificate or Fire No Objection Certificate
3. The Electricity Act, 2003 and the Central Electricity Authority (Measures relating to Safety and Electric Supply) Regulations, 2010 as amended	✓	The facility uses electricity and has a variety of electrical equipment and fixtures in the premises.
4. The Petroleum Act, 1934 and Petroleum Rules, 2002 as amended	✓	The facility stores and uses petroleum in quantities that require a licence from PESO

Applicable Regulation	Reason for Application	
5. The Gas Cylinder Rules, 2016 as amended	✓	The facility uses a variety of gas cylinders in quantities that require a licence from PESO
Employee and Social Welfare		
1. The Building and Other Construction Workers' (Regulation of Employment and Conditions of Service) Central Rules, 1998 & Uttar Pradesh Building and Other Construction Workers (Regulation of Employment and Conditions of Service) Rules, 2008	✓	The project is in construction phase and engages workers in various capacities.
2. Minimum Wages Act, 1948	✓	The Company employs personnel of various skill levels in the facility.
3. The Employees' Provident Funds (EPF) and Miscellaneous Provisions Act, 1952	✓	The Company employs more than 10 personnel across their facilities.
4. Employees' State Insurance Act (ESI), 1948	✓	The Company employs personnel whose monthly remuneration is less than INR 21,000/-
5. The Contract Labour (Regulation and Abolition) Act, 1970; and Contract Labour (Regulation & Abolition) Central Rules, 1971	✓	The Company employs workers on contract for various operations at its facilities.
6. Inter-State Migrant Workers Act, 1979	NA	The Project employs local labours. No inter-stat migrant labours working at the site
7. The Child and Adolescent Labour (Prohibition & Regulation) Act, 1986 amended in 2016	✓	The Company employs personnel of various skill levels in the facilities.
8. The Maternity Benefits Act, 1961	✓	The company adheres to the Maternity Benefits Act,1961 , however currently women employees are not present at the project site.
9. Employee Compensation Act 1923 and Amendment Act 2009	✓	The Company employs personnel whose remuneration is more than INR 21,000/- and thus not covered under ESI.
10. Private Security Agencies (Regulation) Act, 2005	✓	The Company employs private security personnel to provide security to the facilities.

Applicable Regulation	Reason for Application	
11. The Sexual Harassment of Women at workplace (Prevention, Prohibition and Redressal) Act 2013	✓	The Company adheres to POSH policy and provides periodical training, however as of now, there are no any women employees at the construction site

3.3 Method of Assessing Compliance

The compliance status of the projects on applicable EHSS legal regulations is presented in the subsequent sub-sections **3.3, 3.4 and 3.5**. The method of reading the tables is as follows:

- The regulations and their applicable requirements are listed in the first and second columns, respectively.
- The compliance of projects with legal requirements has been indicated based on the legend given below.

C	Regulation and its requirement are applicable to the project. The project is **COMPLIANT** to the requirement.
PC	Regulation and its requirement are applicable to the project. The project is **PARTIALLY COMPLIANT** to the requirement.
NC	Regulation and its requirement are applicable to the project. The project is **NON-COMPLIANT** to the requirement.
NA	Regulation and its requirements are **NOT APPLICABLE** to the project
Info	**INSUFFICIENT INFORMATION** to assess the status of compliance/conformance

- The last column provides remarks on the status of compliance. Text in bold describes the nature of non-compliance.

3.4 Assessment of Legal Compliance - Environment

	Regulation	Legal Requirements	Compliance Status	Details of Compliance/non-Compliance
1.	Water (Prevention and Control of Pollution) Act, 1974; and Rules 1975 Air (Prevention and Control of Pollution) Act, 1981; and Rules 1982	a) Combined Consent to Establish from SPCB u/s 25 Water Act and u/s 21 Air Act b) Comply with conditions of Consent to Establish	**NC**	• The Project is in construction phase. Approximately 35 workers are working on site under the company, contractor, and sub-contractor's site management team. • **The CtE application is under process. The project has not received the consent from SPCB u/s 25 Water Act and u/s 21 Air Act.**
2.	Construction and Demolition Waste Management Rules, 2016	a) Storage of C&D waste/debris a) Mode of disposal of C&D waste u/r 4	C	• The site did not have any demolition waste as there were no structures demolished before the start of the construction. • The C&D waste generated from the project was limited to excavated earth at this stage of the project. • It was informed that this excavated earth will be utilized within the site premises for levelling and backfilling.
3.	Hazardous Wastes (Management, Handling and Transboundary Movement) Rules 2016	Occupier shall be responsible for safe and environmentally sound management of hazardous and other wastes. u/r 4(2)	**NC**	• Generation of hazardous waste is limited to the waste oil, generated from the maintenance of DG set. **It was noted that the DG set used was on lease and information on disposal of waste oil from DG was not available with the site team.** • Waste paints, thinners, expansion joint sealant chemicals (polysulphide sealant) used as part of finishing are other sources of hazardous waste. **It was noted that the waste would be disposed by Contractor upon completion of work, however the Company does not monitor if the contractor does sound disposal of hazardous waste.** • **The Company/Contractor has not shared information on authorized agency for hazardous waste disposal generated during the construction phase.**
4.	Solid Waste Management Rules, 2016	a) Segregated storage of waste into 3 streams bio-degradable, non-	**NC**	The waste generated in the construction site is mainly of soil which is stored inside and will be used internally.

	Regulation	Legal Requirements	Compliance Status	Details of Compliance/non-Compliance
		biodegradable and domestic hazardous wastes u/r 4(a) b) Disposal of segregated wastes to authorised waste collectors or as per the direction or notification by the local authorities. u/r 4(a)		
5.	The Uttar Pradesh Ground Water (Management and Regulation) Rules, 2020	a) Permission for extraction of Ground Water	**NC**	• The project had one borewell on site. • The Project has applied for permission for extraction of ground water, from Uttar Pradesh Ground Water Department (UPGWD) for extraction of ground water. **The project currently does not have the permission for extraction of ground water.** • **The borewell on site is not installed with a flow meter to record quantity of water extracted from the borewell.** • The water extracted from the borewells was utilized majorly for construction purposes.
6.	E-Waste (Management) Rules, 2016	a) E-waste channelization through authorized dismantler or recycler u/r 9(1) b) Maintain records of E-Waste generated in Form-2. u/r 9(2)	C	• At present, negligible amount of E-Waste is generated on-site. • Generation of E-Waste at present is limited to LED/CFL lamps/bulbs used for general lighting.

3.5 Assessment of Legal Compliance - Occupational Health & Safety

#	Regulation	Legal Requirements	Status of Compliance	Details of Compliance/ Non-Compliance
1.	The Building and Other Construction Workers' (Regulation of Employment and Conditions of Service) Central Rules, 1998 & Punjab Building and Other Construction Workers (Regulation of Employment and Conditions of Service) Rules, 2008	a) Safety & Health – General Provisions (Chapter IV) – physical hazards, Personal Protective Equipment (PPE), electrical hazards, vehicular traffic	**PC**	● The project has a dedicated EHS team on site for implementation and management of Safety and Health at workplace. ● Mr. Anoop is the EHS Head at site by the Company. The Company has appointed M/s Thermax Limited as their principal contractor who had appointed one sub-contractor. One Safety Officer (SO) was appointed by Thermax and one Safety Officer by sub-contractor appointed by them, who reported to the SO of Thermax. The Thermax SO reports to EHS Head - ERMPL. ● It was reported that pre-employment medical fitness tests were carried out for all workers. **However, records on the same were not maintained on site or available for review.** ● The company had identified key EHS risks and hazards arising out of the site operations, developed necessary SOP's, Job Safety Analysis (JSAs), Work Permit System, preventive maintenance & Inspection system for tools and equipment. **However, some gaps as mentioned below were observed during the visit:** ○ **Power tool inspections is not in place** ○ **It was observed that many construction labourers were using damaged PPEs. Torn gloves and damaged safety shoes were found to be in use on-site.** ○ **During the audit, a worker was found mixing expansion joint sealant chemicals (polysulphide sealant) by hand without using hand gloves.** ○ **Chemical/paint storage do not have spill trays or secondary containment – MSDS display, and communication is not done.**

#	Regulation	Legal Requirements	Status of Compliance	Details of Compliance/ Non-Compliance
				○ **Electrician observed doing maintenance work without rubber gloves.**
		b) Fire Protection	**PC**	● The project has installed sufficient fire extinguishers and fire buckets at appropriate places throughout the site and feedstock land. The site team had purchased fireballs for firefighting. ● Through photographs and attendance registers, it could be verified that all site personnel and workers were trained in fire safety and participated in mock drills. ● **Periodic internal inspections were not being done to maintain the firefighting infrastructure in good condition.** ● **It was informed that no diesel was stored on site. However, in the site store, 30 liters of diesel was found to be stored in a 50-liter can.**
		c) Lifting appliances and gear (Chapter VII) – testing, safe load indicators, ropes	**PC**	● The project uses excavator and backhoe loader. ● **A valid TPI certificate was not available for review.**
		d) Reporting of Accidents	C	● The project had a system to record all incidents, accidents, and dangerous occurrences occurred on the site. ● These incidents were recorded in prescribed format where they were investigated for the root cause of the event and feasible preventive / corrective measures were taken with the aim to avoid reoccurrence of that incident. ● It was reported that one minor accident leading to property damage happened on 05 September 2022. Soil levelling work was going on in press-mud storage area with the help of Backhoe loader. While soil levelling work was ongoing, the backhoe loader slipped due to muddy soil and its bucket hit the boundary wall.

#	Regulation	Legal Requirements	Status of Compliance	Details of Compliance/ Non-Compliance
				This led to damaging 2 meters span length of boundary wall. No injury was caused to anyone. ● This accident was recorded in prescribed format where they were investigated for the root cause of the event and feasible preventive / corrective measures were taken with the aim to avoid reoccurrence of that incident.
		e) Medical examination – crane operators, exposure to special occupational hazard	**PC**	● It was stated that the Contractor ensures that a pre-employment medical examination is done for all the workers working in site**. However, records of medical examination of workers were not available for review.**
2.	Fire NOC from Municipal Corporation under the Development Control Regulations	a) Obtaining Provisional Fire NOC at the time of obtaining Commencement Certificate from the Municipal Corporation	NC	● **The project has not obtained a Provisional Fire NOC for the BIO CNG Plant from the Department of Fire Services in Uttar Pradesh as per the Uttar Pradesh Fire Service Act, 2005.**
3.	Central Electricity Authority (Measures relating to Safety and Electric Supply) Regulations, 2010	a) General safety requirements for: - Electric supply lines and apparatus safety - Cut-out - Earthed terminal - Dangerous Notice - Flexible Cables	NC	● The project has one (1) DG set on lease for power backup. One (1) new DG set or the site has been installed by the contractor but is not in use currently. The contractor team and project site team are in the process of resolving the issue around payment for operating the new DG set that has been installed. ● The below gaps were observed during the site visit: ○ **The project had not identified an electrician for maintenance and periodic internal inspection of all electrical connections and power tools on site. Currently, the contractor's safety officer oversees electrical safety.** ○ **Earth resistance testing has not been carried out at site.** ○ **It was reported that the DG set was rented from a vendor. A copy of approval from electrical inspector for operation of**

#	Regulation	Legal Requirements	Status of Compliance	Details of Compliance/ Non-Compliance
				generating unit was not available for review. The DG set was in poor condition. The stack height of DG set is not in accordance to Environmental Protection Rules 2002 for DG Sets. ○ **Electrical DB's found in poor condition – loose cable routing, splices in wires and no rubber mats in front of electrical installations.** ○ **Many power tools and electrical distribution boards were observed in use without any inspection tags on them.**
		b) Fire buckets filled with clean dry sand and ready for immediate use for extinguishing fires, in addition to fire extinguishers suitable for dealing with electric fires shall be kept at site	C	● Sufficient sand buckets and fire extinguishers were installed near electrical panels at key areas throughout the site. ● Firefighting equipment were observed well maintained on site. ● The site team had purchased fireballs for firefighting. Through photographs and attendance registers, it could be verified that all site personnel and workers were trained in fire safety and participated in mock drills.
4	The Petroleum Act, 1934 and Petroleum Rules, 2002 as amended (u/r. 116)	Obtain required Licenses for storage of petroleum from PESO	NA	● Small quantities of diesel were found to be stored at site for the DG set. the project did not require a license under the Act for storage of fuel or size of receptacle.
5	Central Motor Vehicle Act 1988 and Rules 1989 (amended 2016)	a) Driver to obtain a driving license authorizing him to drive/operate the vehicle b) Owner to obtain Certificate of Registration for the vehicle	**NC**	● The vehicles used on site were limited to backhoe loader, JCB excavator, and tipper trucks which belonged to the contractors. ● **Valid TPI for the vehicles were not available for review.** ● **Further, the company did not have any system in place to monitor and track the vehicle fitness certificate, PUC, insurance, and driver's license.**

#	Regulation	Legal Requirements	Status of Compliance	Details of Compliance/ Non-Compliance
		c) For valid registration, a transport vehicle should have a Certificate of Fitness d) Owner to obtain insurance policy for the vehicle		• **The Company had no control over vehicles used for transportation of the feedstock.**
6	The Gas Cylinder Rules, 2016 as amended	Obtain required license for storage of compressed gas in gas cylinders from PESO	NA	• No cylinders were observed on the site on the day of the visit.

3.6 Assessment of Legal Compliance - Employee Welfare/ Social

#	Regulation	Legal Requirements	Status of Compliance	Details of Compliance/ Non-Compliance
1.	The Building and Other Construction Workers' (Regulation of Employment and Conditions of Service) Central Act, 1996 and Rules, 1998 & Uttar Pradesh Building and Other Construction Workers (Regulation of Employment and Conditions of Service) Rules, 2009	Contractor to obtain certificate of registration of establishment and workers under the Act	C	• Certificate of registration (Form 2 of BOCW Act, 1996) under BOCW Act vide registration number D53000808 has been obtained in the name of M/s Lakhimpur Kheri RNG Private Limited on 13 December 2022. • The registration has been obtained for a maximum of 100 workers.
		Hours of work, rest intervals & weekly off (Chapter XXVI)	**NC**	• The working hours are 8.30 AM to 8.30 PM. Lunch time is defined from 1 PM to 2 PM and tea-break between 5:30 PM to 6:30 PM. • **It was stated by the security personnel engaged by the contractor that he did not receive any weekly or monthly offs. His shift was twelve-hour long.**
		Welfare of Building workers (Chapter XXVIII) – latrine, urinal	**PC**	• **Insufficient latrines and urinals provided in the construction site for workers. There are only 3 cubicles for workers on the site. It was reported that most common complaint received on site is that of unclean toilets.**

#	Regulation	Legal Requirements	Status of Compliance	Details of Compliance/ Non-Compliance
				• The source of water for the toilet is the borewell.
2.	Minimum Wages Act 1948	Payment of minimum wages as per latest circular. u/s 5&12	**Info**	• The wage register of subcontractor M/s Raj Construction was made available on site for review. However, the soft copy of register had partial information. **Payment of minimum wages could not be ascertained.** • A copy of latest minimum wages abstract was displayed by Company / Contractor.
3.	Employees' Provident Funds (EPF) and Miscellaneous Provisions Act, 1952 amended up to 1996	Deduction of employee contribution and deposit of employee and employer contribution with the authority. u/s 6	**NC**	• **It was reported on site that EPF is not paid for all workers. The explanation provided was that workers do not wish to be paid EPF and prefer to receive the entire wages (sometimes even in cash) without deduction.**
4.	Employees' State Insurance Act (ESI), 1948	Deduction of employee contribution and deposit of employee and employer contribution with the ESI Corporation. u/s 40(1)	**NC**	• **It was reported on site that ESI is not paid for all workers. The explanation provided was that workers do not wish to be paid ESI and prefer to receive the entire wages (sometimes even in cash) without deduction.**
5.	The Contract Labour (Regulation and Abolition) Act, 1970; and Contract Labour (Regulation & Abolition) Central Rules, 1971	a) Company has certificate of registration for employing Contract Labour	**NC**	• It was reported on site that the company has applied for Certificate of Registration under Contract Labour Act. • **However, a copy of the application was not available for review.**
		b) Contractors have obtained license from the Licensing Authority for the jobs assigned to them	**NC**	• It was reported on site that the Contractor has applied for Contractor's License under Contract Labour Act. • **However, a copy of the application was not available for review.**
6.	Inter-State Migrant Workers Act 1979	Companies Registration certificate & Contractor's license for engaging migrant workers (u/s 8)	**NA**	• The project employs local labours. No Inter-state migrant labours employed at the site.
7.	Child Labour (Prohibition and	a) No child shall be employed or permitted to work in any occupation or	C	• No instances of child and adolescent labour employment were observed on site.

#	Regulation	Legal Requirements	Status of Compliance	Details of Compliance/ Non-Compliance
	Regulation) Act, 1986 amended in 2017	process. b) Working conditions for adolescent labour		• Aadhar cards are verified of workers during screening at pre-employment stage.
8.	The Maternity Benefits Act, 1961	Right to payment of Maternity Benefits. u/s 5	**NA**	• As of now, there are no any women employees at the construction site
9.	Employee Compensation Act 1923 and Amendment Act 2009	Payment of compensation to employees.	C	• Insurance policy as required for workmen compensation covering Contract workers was verified for the subcontractor. • M/s Raj Construction has obtained insurance policy for workmen compensation vide Reliance Employees Compensation Insurance Policy Schedule Policy No. 920222227110014565.
10.	Private Security Agencies (Regulation) Act (PSARA), 2005	a) Private Security Agency to obtain a license. u/s 4	C	• M/s Skylark Cagers India Pvt Ltd have been hired as a third-party security agency by the Company. • PSARA license has been obtained by Skylark Cagers India Pvt Ltd vide Serial No. 1611/UP/PSA/Ghaziabad-138/2017. The license was issued on 11 July 2019 and is valid till 10 July 2024.
11.	The Sexual Harassment of Women at workplace (Prevention, Prohibition and Redressal) Act 2013	a) Constitution of Internal Complaints Committee (ICC). u/s 4 b) Receive complaints of sexual harassment. u/s 9 a) Submission of annual return to the District Officer c) Conduct enquiry on receipt of complaint. u/s 11	NA	• As of now, there are no any women employees at the construction site

3.7 Assessment of Legal Compliance - Land

#	Regulation	Legal Requirements	Status of Compliance	Details of Compliance/ Non-Compliance
1.	Panchayats Act, 1994	Permission for construction of projects including the installation of machinery	NA	• The land (total of 11 acres) has been taken on a lease from two separate owners for a period of 25 years. The agreement number is IN-UP93498857436627U. The lease agreement mentions the purpose of use of land and right of way. There was an access road passing through the parcel of land earlier which is now shifted to an appropriate location after the land was acquired.

4 Status of Conformance to IFC Performance Standards

4.1 Applicability of IFC Performance Standards

There are a total of eight (8) Environmental and Social Performance Standards under IFC's Sustainability Framework of 2012, the applicability of which is assessed in **Table 4-1**.

Table 4-1: Establishing Applicability of IFC Performance Standards

Performance Standard	How the Performance Standard is applicable?	Statement on Applicability
Performance Standard 1: Assessment and Management of Environmental and Social Risks and Impacts	The project activities have the potential to cause environmental and social impacts.	**Applicable**
Performance Standard 2: Labor and Working Conditions	The project employs skilled, semi-skilled and skilled personnel for various operations.	**Applicable**
Performance Standard 3: Resource Efficiency and Pollution Prevention	The project consumes resources (water, energy) and generates effluent and waste (solid, e-waste, hazardous waste, construction, and demolition).	**Applicable**
Performance Standard 4: Community Health, Safety, and Security	The project could potentially impact the community health, safety, and security.	**Applicable**
Performance Standard 5: Land Acquisition and Involuntary Resettlement	The project does not involve land acquisition of any kind.	Not Applicable
Performance Standard 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources	The projects do not interact with forests or biodiversity rich areas.	Not Applicable
Performance Standard 7: Indigenous Peoples	The projects have not been developed on Scheduled Areas or tribal lands	Not Applicable
Performance Standard 8: Cultural Heritage	The projects are not located near any place of cultural importance.	Not Applicable

4.1.1 World Bank Group's EHS Guidelines

The IFC Performance Standard 3: Resource Efficiency and Pollution Prevention refers to World Bank Group's EHS Guidelines. The **EHS General Guidelines** is applicable to the Company. For ease of reference, the General guidelines have been integrated with the IFC Performance Standards as applicable.

4.2 Method of Assessing Compliance and Gaps

The assessment of projects with requirements of IFC Performance Standards 1, 2, 3, and 4 and WB-General EHS guidelines is presented in the subsequent **sub-sections 4.2.2, 4.2.3, 4.2.4, and 4.2.5** respectively.

4.2.1 Method of Assessment

The method of reading the tables under these sections is as follows:

- The requirements of the IFC-PS and WB-EHS guidelines are listed in the first column.
- The level of alignment of the projects with the IFC-PS and WB-EHS guideline requirements has been determined and assessed based on the legend given below.

Aligned	Requirement is applicable to the project. The project is in alignment with the intended outcome of the requirement.
Partially Aligned	Requirement is applicable to the project. The project partially fulfils or partially aligns with the intended outcome of the requirement.
Not Aligned	Requirement is applicable to the project. The project does not fulfill or align with the intended outcome of the requirement.
Insufficient Information	Requirement is applicable to the project. Information to assess the level of alignment is insufficient.
NA	Requirement is not applicable to the project.

- The last column provides remarks on the status of alignment. Text in **bold** describes the nature of non-alignment.

4.2.2 Performance Standard 1 – Assessment and Management of Environmental and Social Risks and Impacts

#	IFC PS Requirements 2012	Alignment Status	Details of Conformance/ Non-Conformance
1.	Environmental and Social (E&S) Policy	Aligned	• The Company has developed Health, Safety, Social, Environment & Quality (HSSEQ) Policy at Corporate level. • Further at project level, the EPC Contractor has developed an OHSE policy which is well displayed at the site at key locations in English as well as Hindi.
2.	Process for identifying the environmental and social risks and impacts	Aligned	• The company has developed an E&S screening checklist to identify the environmental and social risks. • The screening of E&S risks and impact was carried out by the ERMPL team for this site. Further a site-specific HSE Plan and HIRA was developed by the Company EHS Head. • Management programs, training requirements, operational controls etc. are developed for the risks identified as part of the HIRA. • The project has identified sufficient resources for implementation and monitoring of these management programs.
3.	Management programs for performance improvement measures and actions for identified environmental and social risks		
4.	Organization structure that defines roles, responsibilities, and authority to implement the ESMS	Aligned	• At present, six (6) managerial employees of ERMPL are working on site who have defined roles and responsibilities for project monitoring and execution. • ***Please refer Section 2.2 of this document for Organization structure of the project.***
5.	Emergency preparedness and response (EPR) system	Aligned	• A site specific EPR manual is prepared by EPC Contractor (Thermax) for the project which has identified the potential emergencies which may occur on site. • Internal and external emergency contact numbers are identified as part of the EPR manual. • Periodic mock drills are done on site on all potential emergencies and records for the same are maintained.
6.	Procedures to monitor and measure the effectiveness of the management program, as well as compliance with any related legal and/or contractual obligation	**Not Aligned**	• Compliance to both projects specific legal requirements was monitored and recorded from the site office of the project. • **A site-specific suitable checklist/ tracker to monitor legal requirements and other contractual obligations had not been developed.**

#	IFC PS Requirements 2012	Alignment Status	Details of Conformance/ Non-Conformance
7.	Stakeholder Engagement for information disclosure and grievance mechanism Procedure for external communications receipt, analysis, response and action plan Ongoing Reporting to Affected Communities	Partially Aligned	• Grievances from neighboring communities, if any, would be directed to the Company representative present on-site. • The Company representative would be responsible for redressal of the same.

4.2.3 Performance Standard 2 – Labour and Working Conditions

#	IFC PS Requirements 2012	Alignment Status	Details of Conformance/Non-Conformance
1.	Adopt and implement human resources policies and procedures	Aligned	• The Company employs seven (7) full-time employees as part of their on-site team for the project. • The Company has HR department who has developed several policies and procedures for human resource management.
2.	Provide workers with documented information regarding their rights under national labor and employment law	**Partially Aligned**	• The Company's HR provides employees with documented information regarding their rights under national labor and employment law in appointment letters. • **The workers appointed by the Contractors were provided with verbal communication on the work hours, wages, and other welfare benefits.** • **Sample appointment letter issued to the workers by the contractor were not available for review.**
3.	Respect collective bargaining agreement with workers' organization	Aligned	• Clauses discouraging collective bargaining or formation of worker unions were not observed as part of the HR policies of the Company. • Further during consultation with site staff and the corporate HR team, it was reported that no formal workers organizations were present at the Company or at the facility.
4.	Not discourage workers from electing worker representatives, forming or joining workers' organizations for collective bargaining. Will not discriminate against workers joining such organizations.	Aligned	• No instance of company discriminating against or discouraging workers from electing worker representatives, forming, or joining workers' organizations for collective bargaining collective bargaining agreement with workers' organization.

#	IFC PS Requirements 2012	Alignment Status	Details of Conformance/Non-Conformance
			• There does not exist a workers' organization or collective on site currently. • Most workers engaged were through Contractors and sub-contractors who had appointed supervisors to whom complaints if any, were addressed.
5.	Base the employment relationship on the principle of equal opportunity and fair treatment	Aligned	• No instance of unfair treatment or conditions creating unequal opportunity.
6.	Take measures to prevent and address harassment, intimidation, and/or exploitation, especially regarding women	-	• Please refer to point no. 11 under section 3.5.
7.	Procedure for addressing collective dismissals/ retrenchment	**Not Aligned**	• It was reported that no retrenchment had taken place in the Project till the time of audit. • **However, procedures for addressing collective dismissals/ retrenchment have not been developed by the Company.**
8.	Provide a grievance mechanism for workers (and their organizations, where they exist) to raise workplace concerns.	Aligned	• It was reported that worker grievances related to work activities, if any, were addressed to their work supervisors and contractors. • It was also reported that no major grievances had been reported till date. • Grievances raised using the QR code are maintained in an excel file at the company level.

#	IFC PS Requirements 2012	Alignment Status	Details of Conformance/Non-Conformance
9.	Not employ children in any manner that is economically exploitative, or is likely to be hazardous or to interfere with the child's education, or to be harmful to the child's health or physical, mental, spiritual, moral, or social development	Aligned	• No instances of child labour were observed on site. • It was reported that child labour was strictly restricted and age verification mechanisms were put in place and the same was communicated to the respective Contractor while signing the work order.
10.	Not employ forced labour, which consists of any work or service not voluntarily performed that is exacted from an individual under threat of force or penalty	Aligned	• No instances of Company engaging in forced labour practices were noted during the discussions and site visit.
11.	Provide a safe and healthy work environment, taking into account inherent risks in its particular sector and hazards in work areas	***Intentionally left blank***	
	a) Slips & Falls b) Struck by objects c) Work at Height d) Overexertion	**Partially Aligned**	• **Yes, slips, falls, work at height and struck by objects have been considered.** • **Work hours were defined at 12 hours per day including rest periods for lunch and tea.**
	e) Confined spaces & excavations	NA	• The present work did not involve creation of confined spaces.
	f) Moving machinery	Aligned	• No unsafe equipment / machinery could be evidenced on site.
	g) Dust	**Not Aligned**	• **The site consisted of very fine sand. Sprinkling of water was not carried out to minimize dust generation resulting from construction works.**
	h) Exposure to dust, chemicals, hazardous or flammable materials, and wastes in a combination of liquid, solid, or gaseous forms	**Not Aligned**	• Chemicals stored on-site were minimal, which included those required for waterproofing, paints, sealing expansion joints, etc. • **Material Safety Data Sheets (MSDS) of the chemicals used on site were not displayed at storage locations. Awareness of MSDS was poor. Secondary containment and spill trays were not in place to retain accidental spills.**
	i) Fire precautions	-	• Fire precautions have been taken
	j) Potable Water Supply	Aligned	• Drinking water is sourced from a 3rd party vendor in 20-liter cans. RO purified water is supplied by the vendor.

#	IFC PS Requirements 2012	Alignment Status	Details of Conformance/Non-Conformance
	k) First aid	**Partially Aligned**	• First aid box was available on site and the contents were found to be satisfactory. • **However, certificates of employee trained in First Aid and Basic firefighting were not available for review.**
	l) Labour camps	Aligned	• The accommodation is a two-storied building with rooms on both floors. There is a common kitchen and shared toilet facilities in the building. • The rooms are furnished with beds, cupboards, and tables. • The occupancy in each room is of 3 workers.
	m) Communication and Training • OHS Training • New Task Employee and Contractor Training • On-site first-aid training	Aligned	• It was reported that tools box talks, induction, mock drills, incident reporting and investigation were carried out. Photographic evidence of the same was reviewed in the site office. • Records of the communication & training were maintained by safety officer.
12.	With respect to contracted workers, ascertain that the third parties who engage these workers are reputable and legitimate enterprises	Aligned	• It was reported that the Company primarily engages with Contractors with whom it has experience of working in past. • It was ensured that these contractors are legitimate enterprises.
13.	Monitor primary supply chain on an ongoing basis to identify new risks or incidents of child and/or forced labour, and life-threatening situations	Aligned	• The primary suppliers of the project include suppliers of construction material, and feedstock from sugar mills. • The company has a draft SOP for supply chain management. The company has a purchase policy and procurement policy in practice for purchase of construction material. • The Company has a contract agreement with the sugar mills to influence over practices adopted by the feedstock suppliers. Monitoring of supply chain for feedstock is practiced.

4.2.4 Performance Standard 3: Resource Efficiency and Pollution Prevention

#	IFC PS Requirements 2012	Alignment Status	Details of Conformance/ Non-Conformance
1.	Implement technically and financially feasible and cost-effective measures for improving efficiency in its consumption of energy, water, as well as other resources focusing on core business areas a) Energy Conservation b) Water Conservation	NA	• At present no specific measures related to conservation of energy and water had been implemented on-site.
2.	Take measures to avoid and reduce release of pollutants to air, water, and land due to routine, non-routine, and accidental circumstances with the potential for local, regional, and trans-boundary impacts.	***Intentionally left blank***	
	a) Noise & Vibration	Aligned	• Most of the activities carried out at present do not involve generation of high noise and vibration.
	b) Soil erosion	NA	• Project activities at present do not cause soil erosion and hence this requirement is not applicable.
	c) Air quality	**Not Aligned**	• The project uses a DG set for power backup only.
	d) Solid Waste	-	• ***Please refer point #2 & #4 of Section 3.4***
	e) Hazardous materials	-	• ***Please refer point #3 of Section 3.4***
	f) Wastewater discharges	Aligned	• Wastewater discharges were limited to the sewage from toilets and washrooms which were collected in underground soak pits.
	g) Contaminated land	Aligned	• No activity causing soil contamination were observed during the site visit.

4.2.5 Performance Standard 4: Community Health, Safety, and Security

#	IFC PS Requirements 2012	Alignment Status	Details of Conformance/ Non-Conformance
1.	Design, construct, operate, and decommission the structural elements or components considering risks to third parties	Info	• **The project is in construction stage and in absence of factory license & approved layout the compliance cannot be ascertained.**
2.	Avoid or minimize the potential for community exposure to hazardous materials and substances that may be released by the project.	-	***Please refer points 2, 3, 4, 5 & 6 of Section 3.4 and points 2 (a)(b)(c) & (g) of Section 4.2.4 of this document.***

#	IFC PS Requirements 2012	Alignment Status	Details of Conformance/ Non-Conformance
3.	Avoid or minimize the potential for community exposure to water-borne, water-based, water-related, and vector-borne diseases, and communicable diseases that could result from project activities	-	• ***Please refer points 2 (f) of Section 4.2.4 of this document for further details.***
4.	Assess risks posed by its security arrangements to those within and outside the project site.	-	***Please refer #10 of Section 3.5 of this document.*** • It was reported that the security staff present at these sites were unarmed and possessed no major threat within and outside the facility.
5.	Assist and collaborate with the Affected Communities, local government agencies, and other relevant parties, in their preparations to respond effectively to emergency situations. • Emergency Preparedness and Response • Life and Fire Safety	Aligned	• The company has prepared site specific emergency preparedness response plan for the project which has identified potential emergencies which may occur on site. • The EPRP identifies an Emergency Control Team on site which has defined roles and responsibilities in case of emergencies. • Regular mock drills on potential emergencies are conducted on site periodically.
6.	The project's direct impacts on priority ecosystem services may result in adverse health and safety risks and impacts to Affected Communities.	Aligned	• The projects do not result in loss of natural buffer areas such as wetlands, mangroves, and upland forests.
7.	Traffic Safety	**Partially Aligned**	• **Only verbal communication was carried out to the third-party vendors to ensure that all permits and licenses were maintained.** • In addition to this, security guards played a role for management of vehicular traffic on site.
8.	Restricting access to the site, through a combination of institutional and administrative controls	Aligned	• Site access was restricted to authorized persons only. • Security guards were present at the site to monitor and ensure restricted access to unauthorized people. • Barricading of the project boundary was carried out to ensure restricted access.
9.	Removing hazardous conditions on construction sites: • covering openings to small, confined spaces • ensuring means of escape for larger openings such as trenches or excavations	-	***Please refer points 1(a) of section 3.4 of this document.***

#	IFC PS Requirements 2012	Alignment Status	Details of Conformance/ Non-Conformance
	• locked storage of hazardous materials		

4.2.6 Performance Standard 5: Land Acquisition

#	IFC PS Requirements 2012	Alignment Status	Details of Conformance/ Non-Conformance
1.	Land rights or land use rights procured through negotiated settlements with property owners or those with legal rights to the land if failure to reach settlement would have resulted in expropriation or other compulsory procedures	Aligned	• The private land for the entire project has been leased for a period of 25 years. It was confirmed that the project does not involve any force eviction and that the land sellers have been paid based on mutual negotiations and consultations.
2.	Payment of compensation for land purchased	NA	
3.	Project situations where involuntary restrictions on land use and access to natural resources cause a community or groups within a community to lose access to resource usage where they have traditional or recognizable usage rights.	Aligned	• No such instances have been observed on site and during interactions with land procurement team it was reported that care is taken during land procurement that such involuntary restrictions are avoided or mitigated appropriately.
4.	Disclosure of relevant information and participation of affected communities – related to land	NA	• During the interactions and through the documents reviewed, it was understood that the local community and lessors are informed of the end use of this transaction and all negotiations are undertaken in a fair and transparent manner.
5.	Grievance Redress Mechanism for affected communities – related to land	**Partially Aligned**	• For any concerns related to the land lease, the Company is contacted. • Procedures on recording, handling and redressal of grievances have been developed as a part of the EHS plan. **However, a register is not maintained, and issues are heard and solved through verbal communication.** • Further, during site visit, it was reported by site team that there have been no instances of major grievances till date on aspects related to land and thus it is not documented.

5 Environmental & Social Action Plan

5.1 Prioritization of Actions

The actions to be undertaken for establishing compliance to legal requirements and conformance to IFC Performance Standards have been provided in the subsequent sub-sections.

The actions will be classified as 'High', 'Medium', 'Low' and 'Good Practice', to enable prioritization and planning of human and financial resources.

- **'High'** priority actions demand urgent attention. These actions if not implemented could lead to legal liabilities or emergency situations. These actions should be implemented at the earliest. These are mostly related to absence of consent/ permit/ approval from regulatory authorities that pose a threat to business continuity.
- **'Medium'** priority actions are those which are management program oriented. This also covers such actions, which if not implemented, can lead to potential legal labilities. These actions would need time to create a systemic approach.
- **'Low'** priority actions are those which are management program oriented. The actions are more practice oriented.
- **'Good Practice'** are actions, which if implemented by the company would add value to the system. Many of them have been identified as a result of IFC Performance Standards and EHS Guidelines.

5.2 Methodology of Action Plan

The E&S Action Plan (ESAP) for establishing compliance to EHS legal requirements, aligning to the IFC Performance Standards and WB-EHS guidelines has been provided in subsequent subsections.

The method of reading the E&S – Action Plan is as follows:

a) The second column lists the non-compliance / non-conformance identified during the evaluation presented in Section 3 and Section 4 of this report.
b) The recommended actions for closing the non-compliance/ non-conformance have been specified in the third column.
c) The fourth column assigns priority as High, Medium, Low, and Good Practice based on the nature of non-compliance/ non-conformance identified.
d) The responsibility of implementation and required timeline is presented in the fifth & sixth columns.
e) The seventh and eight column provides monitoring guidance (evidence to be checked on completion of the action) and an estimate on cost/resources.

5.3 ESAP - Legal Compliance

#	Nature of Non-Compliance	Recommended Action	Priority	Responsibility	Timeline	Expected Deliverables	Estimated cost / Resource needs	Way Forward
Legal Compliance – Environment								
1	• The CtE application is under process. The project has not received the consent from SPCB u/s 25 Water Act and u/s 21 Air Act.	• The Company shall ensure that all necessary permissions are taken, and licenses are obtained before commencement of work. • The Company shall further ensure and periodically monitor compliance to conditions of CtE – the Company before starting construction activity shall obtain site clearance u/s 41 (A) of the Factories Act, 1948 for the given project	**High**	Company Management Project Site Management	1 month	Copy of CtE Dated photographs of Compliance to conditions of CTE	Management time Fees for obtaining consent	CTE obtained under Air and Water Act dated 25.03.2023 with validity up to 31.03.2027
2	• It was noted that the DG set used was on lease and information on disposal of waste oil	• The Company/Contractor shall identify hazardous waste generated from	**High**	Project Site Management	3 months	Copy of contract/ agreement with	Management time	• The hazardous waste generated in the plant is stored in the designated area.

#	Nature of Non-Compliance	Recommended Action	Priority	Responsibility	Timeline	Expected Deliverables	Estimated cost / Resource needs	Way Forward
	from DG was not available with the site team. • It was noted that the waste would be disposed by Contractor upon completion of work, however the Company does not monitor if the contractor does sound disposal of hazardous waste. • The Company/Contractor has not shared information on authorized agency for hazardous waste disposal generated during the construction phase.	the site and collect it centrally in a hazardous waste storage area. • Used oil should be disposed to authorized recyclers only. • The vendor carrying out maintenance activities should either be asked to take the used oil filters and oil-soaked cotton with them so that they can dispose it as hazardous waste or these should be separately collected and disposed to a TSDF. • The records of hazardous waste generated and disposed should be maintained in format provided in Form-3 and Form-10 respectively of the Hazardous Waste Rules, 2016.		Contractor's team		authorized vendor and subsequent disposal manifests (Form-10) Copy of records of storage of hazardous wastes (Form-3)	Cost of hiring a vendor Costs for secured storage, transportation and disposal	• Used oil is disposed through authorized recyclers. • It is the responsibility of the vendors to remove the used oil filters and oil-soaked cotton from the premises and dispose it to the nearest TSDF. • The records of hazardous waste generate din the plant is maintained.

#	Nature of Non-Compliance	Recommended Action	Priority	Responsibility	Timeline	Expected Deliverables	Estimated cost / Resource needs	Way Forward
3	• Disposal of Construction and Demolition waste at the site	• SOPs for waste management should be developed / strengthened and communicated to all site teams and contractors. • Records of disposal should be maintained on site. • Identify and store solid and C&D in designated locations such that it does not pose a risk to habitats or cause traffic hazards. • Ensure all wastes are segregated and stored in bins with adequate containment to prevent spillages. • Periodically dispose of all solid waste and C&D wastes as per instructions from the local authorities and maintain records of	**Medium**	Project Site Management Contractor's team	3 months	SOPs for waste management Waste Disposal Records Photographic evidence of waste segregation Copy of contract with a vendor	Management time Cost of hiring a vendor Costs for transport and disposal	• SOPs for waste management has been developed and communicated to all team members • Records of waste disposal maintained at the site. • C&D wastes (mostly excavated soil) are being reused in the plant construction itself. Dumping outside is prohibited.

#	Nature of Non-Compliance	Recommended Action	Priority	Responsibility	Timeline	Expected Deliverables	Estimated cost / Resource needs	Way Forward
		generation and disposal. • Prevent dumping of waste in the lake or streams nearby to avoid any contamination and disturbance to critical habitats located along their stretches.						
4	• The project currently does not have the permission for extraction of ground water. • The borewell on site is not installed with a flow meter to record quantity of water extracted from the borewell.	• The Company shall obtain NOC for extraction of water for the borewell which is being utilized to extract ground water. • Water flow meters shall be installed on borewell to record and ensure water withdrawal within the permitted limits in the NOC/approval. • Any defunct well may be decommissioned using standard methods from bottom to ground	High	Company Management Project Site Management	3 months	NOC/approval for water withdrawal Water flow meter installation on bore well and daily withdrawal records	Management time Fees for obtaining the NOC Cost of purchasing and installing flow meter	The Project obtained the CGWA-NOC for extraction of ground water for both domestic and process with 3 years validity for 10 kld.

#	Nature of Non-Compliance	Recommended Action	Priority	Responsibility	Timeline	Expected Deliverables	Estimated cost / Resource needs	Way Forward
		level incorporating sand and bentonite grounds.						
Legal Compliance – Occupational Health & Safety								
5	• It was reported that pre-employment medical fitness tests were carried out for all workers. However, records on the same were not maintained on site or available for review. • Records of medical examination of workers were not available for review.	• The company should maintain records of the pre-employment medical fitness tests as well as the annual fitness tests carried out for all workers and staff.	**Medium**	Project Site Management Contractor's team	3 months	Copies of medical fitness tests records for all workers and staff	Management time only	• Ever Enviro Business specific ESGMS was finalized in February 2023 that includes HSE and IMS. The systems and procedures are diligently followed. • Annual medical fitness tests will be undertaken during construction/operation phase as per the systems and procedures defined in the ESGMS
5	Some gaps as mentioned below were observed during the visit: • Power tool inspections is not in place	• The work permit system must be implemented effectively. The work permit shall record no. of persons to be engaged in the work	**High**	Project Site Management Contractor's team	3 months	Dated photographs of compliance	Management time only	• Work permit system has been implemented at the site.

#	Nature of Non-Compliance	Recommended Action	Priority	Responsibility	Timeline	Expected Deliverables	Estimated cost / Resource needs	Way Forward
	• It was observed that many construction labourers were using damaged PPEs. Torn gloves and damaged safety shoes were found to be in use on-site. • During the audit, a worker was found mixing expansion joint sealant chemicals (polysulphide sealant) by hand without using hand gloves. • Chemical/paint storage do not have spill trays or secondary containment – MSDS display, and communication is not done.	activity. TBT sheet in the work permit is not filled. • Appropriate use of PPE's shall be ensured. • All chemical / paint storage shall be stored within a secondary containment with spill tray or bund walls to retain spills. MSDS of the chemical / paint shall be displayed and communicated to the user. • Rubber gloves shall be provided to the electrician and use shall be ensured.						• Appropriate usage of PPEs are being ensured. • All chemical /paint containers are stored in the separate secondary containment. • Rubber gloves are being provided to the electricians.
7	• Periodic internal inspections were not being done to maintain the firefighting	• Firefighting infrastructure (Fire hydrant, Fire extinguishers, fire balls,	**Medium**	Project Site Management	6 months	Inspection tags Test Reports	Management time	• Ever Enviro Business specific ESGMS was finalized in February 2023 that includes HSE

#	Nature of Non-Compliance	Recommended Action	Priority	Responsibility	Timeline	Expected Deliverables	Estimated cost / Resource needs	Way Forward
	infrastructure in good condition.	etc.) should be identified and installed as applicable to the facility. • Firefighting infrastructure should be periodically checked for integrity and usability. • A register should be developed and maintained for inspection.		Contractor's team		Firefighting inspection and maintenance register	Cost of hiring a vendor for maintenance of firefighting infrastructure	and IMS. The systems and procedures are diligently followed. • Fire fighting infrastructure will be identified and installed as applicable. • Fire fighting infrastructure will be checked periodically. • Register will be maintained for inspection.
8	• A valid TPI certificate is necessary for all lifting tools	• TPIs should be maintained for all lifting appliances and gears with records of testing, safe load indicators, etc.	High	Project Site Management Contractor's team	3 months	TPI records	Management time only	TPIs will be maintained for all lifting tools as applicable.
9	• The project has not obtained a Provisional Fire NOC for the BIO CNG Plant from the Department of Fire Services in Uttar Pradesh as per the	• Fire NOC for the project site should be obtained from the from the Department of Fire Services in Uttar Pradesh as per the Uttar Pradesh Fire Service Act, 2005 and maintained at project site office for records.	High	Company Management Project Site Management	3 months	A copy of Fire NOC	Management time Cost for obtaining the NOC	Fire NOC will be obtained after the commencement of operation.

#	Nature of Non-Compliance	Recommended Action	Priority	Responsibility	Timeline	Expected Deliverables	Estimated cost / Resource needs	Way Forward
	Uttar Pradesh Fire Service Act, 2005.							
10	The below gaps were observed during the site visit: ● The project had not identified an electrician for maintenance and periodic internal inspection of all electrical connections and power tools on site. Currently, the contractor's safety officer oversees electrical safety. ● Earth resistance testing has not been carried out at site. ● It was reported that the DG set was rented from a vendor. A copy of approval from electrical inspector for operation of generating unit was not available for review. The DG set was in poor	● The Company must ensure periodic inspection of all electrical installations, distribution boards, power tools and cable routings. ● Where signs of hardening and breakage are identified, these should be replaced over a feasible timeline and corrections made should be documented. ● All unsafe tools/equipment observed in periodic inspection must be tagged red and shall be removed from site until rectified. ● Rubber mats shall be placed in front of all electrical DB's	High	Project Site Management Contractor's team	3 months	Records of inspection Electrical safety inspection reports (internal) Dated photographs Purchase order issued for the installation of stacks and payments released Copy of earth pit resistance reports	Management time Cost of purchasing rubber mats and electrical safety gloves. Costs for fabrication (DG Set stack) Expenses related to earth pit testing	● A designated electrician for maintenance activities has been appointed. ● Regular inspection, training to workers are being undertaken. ● All unsafe tools / equipment are tagged and removed from the site. ● Rubber mates will be provided in front of all electrical DB's ● Electrician is provided with rubber gloves. ● Installations of resuscitation charts for persons suffering from electric shock will be carried out across the project site as applicable. ● DG set will be provided with adequate stack height.

#	Nature of Non-Compliance	Recommended Action	Priority	Responsibility	Timeline	Expected Deliverables	Estimated cost / Resource needs	Way Forward
	condition. The stack height of DG set is not in accordance to Environmental Protection Rules 2002 for DG Sets. ● Electrical DB's found in poor condition – loose cable routing, splices in wires and no rubber mats in front of electrical installations. ● Many power tools and electrical distribution boards were observed in use without any inspection tags on them.	● The qualified electrician shall be provided with electrical safety gloves for maintenance work. ● Installations of resuscitation charts for persons suffering from electric shock should be carried out across the project site. ● For DG sets, install a stack of sufficient height above the roof as per Central Pollution Control Board (CPCB) Guidelines (Emission Regulations Part IV: COINDS/26/1986-87). ● Indicatively for DG set of capacity between 50 kVA to 100 kVA, total stack height required = Height of building in which DG set is installed (m.) + 2 m ● Earth pit resistance tests should be carried out at least annually in each asset through a						● Annual earth pit resistance shall be carried out as per the applicable procedure.

#	Nature of Non-Compliance	Recommended Action	Priority	Responsibility	Timeline	Expected Deliverables	Estimated cost / Resource needs	Way Forward
		certified electrician. Records post tests should be maintained						
11	• Valid TPI for the vehicles were not available for review. • Further, the company did not have any system in place to monitor and track the vehicle fitness certificate, PUC, insurance, and driver's license. • The Company had no control over vehicles used for transportation of the feedstock.	• The company must establish a system in place to monitor and track the vehicle fitness certificate, PUC, insurance, and driver's license of all the project vehicles along with vehicles used for transportation of feedstock. • A master list of the project vehicles can be maintained to keep a track. • Vehicles without registration no. plates shall not be allowed on site.	**Medium**	Project Site Management Contractor's team	6 months	Records of details of project vehicle/driver details	Management time only	• Ever Enviro Business specific ESGMS was finalized in February 2023 that includes HSE and IMS. The systems and procedures are diligently followed. • Master list of project vehicles will be maintained. • Vehicles with out registration number plates are not allowed into the site.
Legal Compliance – Employee Welfare/ Social								
12	• It was stated by the security personnel engaged by the	• As per the Uttar Pradesh Building and Other Construction	**High**	Project Site Management	1 month	Copy of attendance register	Management time only	• Ever Enviro Business specific ESGMS was

#	Nature of Non-Compliance	Recommended Action	Priority	Responsibility	Timeline	Expected Deliverables	Estimated cost / Resource needs	Way Forward
	contractor that he did not receive any weekly or monthly offs. His shift was twelve-hour long.	Workers (Regulation of Employment and Conditions of Service) Rules, 2009, all workers should get rest intervals and weekly off.		Contractor's team				finalized in February 2023 that includes HSE and IMS. The systems and procedures are diligently followed. • All benefits / work / rest timing to the FTE/Contractors will be provided as per the HR policy.
13	• Insufficient latrines and urinals provided in the construction site for workers. There are only 3 cubicles for workers on the site. It was reported that most common complaint received on site is that of unclean toilets.	• Sufficient infrastructure for worker welfare should be provided on site. • This infrastructure should be well maintained and clean.	**Medium**	Project Site Management Contractor's team	3 months	Dated photographs	Management time Cost of building infrastructure	• Sufficient infrastructure like latrine, rest room has been developed at the site.
14	• In absence of a complete and comprehensive wage register of the major civil contractor, payment of minimum	• The Company shall ensure that all contract workers are paid remuneration by the contractor that is equal to or above the	**High**	Project Site Management Contractor's team	1 month	Copy of revised Wage Register Copy of payment slips	Management time only	• Ever Enviro Business specific ESGMS was finalized in February 2023 that includes HSE and IMS. The systems

#	Nature of Non-Compliance	Recommended Action	Priority	Responsibility	Timeline	Expected Deliverables	Estimated cost / Resource needs	Way Forward
	wages could not be ascertained. • The Company does not monitor Contractors EPF and ESI contribution to workers. • It was reported on site that EPF is not paid for all workers. The explanation provided was that workers do not wish to be paid EPF and prefer to receive the entire wages (sometimes even in cash) without deduction. • It was reported on site that ESI is not paid for all workers. The explanation provided was that workers do not wish to be paid ESI and prefer to receive the entire wages (sometimes even in	minimum wages stipulated by the State Labour Department. The company shall keep records of wages paid by the contractors and monitor the same on the regular basis. • The Company shall ensure payment of EPF and ESI by monitoring Contractors EPF and ESI contribution to workers. • The difference in wages for the months in which the wages paid were less than minimum wages should be calculated and paid at the earlies. • The Company should ensure that the arrears are paid to the workers by the Contractor.				with payment of arrears Copy of ESI and EPF challans Dated photographs of abstracts displayed on site		and procedures are diligently followed. • All benefits / work / rest timing to the FTE/Contractors will be provided as per the HR policy. • Payment of EPF and ESI contribution to workers by contractors are being monitored. • All other pending issues are being followed up with the contractors to ensure the benefits to the employees are paid as per the existing regulations.

#	Nature of Non-Compliance	Recommended Action	Priority	Responsibility	Timeline	Expected Deliverables	Estimated cost / Resource needs	Way Forward
	cash) without deduction.							
15	• It was reported on site that the company has applied for Certificate of Registration under Contract Labour Act. • However, a copy of the application was not available for review	• Certificate of Registration under Contract Labour Act should be obtained by the company at the earliest and a copy of same should be maintained at project site for records.	High	Project Site Management Contractor's team	1 month	A copy of Certificate of Registration under Contract Labour Act	Management time Application fees	• Certificate of Registration under Contract Labour Act has been obtained by the company
16	• It was reported on site that the Contractor has applied for Contractor's License under Contract Labour Act. • However, a copy of the application was not available for review.	• Contractor's License under Contract Labour Act should be obtained by the contractor at the earliest and a copy of same should be shared with the company and maintained at project site for records.	High	Project Site Management Contractor's team	1 month	A copy of Contractor's License under Contract Labour Act	Management time	• Contractor's License under Contract Labour Act has been obtained
17	• Registration of the project and license under the Inter-State Migrant Workers Act to engage inter-state migrant workers has	• Application should be submitted by the Company to obtain registration for the project engaging inter-state migrant workers	High	Project Site Management Contractor's team	3 months	Copy of Registration Certificate Copy of License	Management time only	• Ever Enviro Business specific ESGMS was finalized in February 2023 that includes HSE and IMS. The systems

#	Nature of Non-Compliance	Recommended Action	Priority	Responsibility	Timeline	Expected Deliverables	Estimated cost / Resource needs	Way Forward
	not been obtained by the company and contractor respectively	under the Inter-State Migrant Workers Act. • Application should be submitted by the Contractor to obtain license for engaging inter-state migrant workers under the Inter-State Migrant Workers Act.						and procedures are diligently followed. • There are no any interstate migrant labours at the site.

5.4 ESAP - IFC Performance Standards

#	Nature of Non-Compliance	Recommended Action	Priority	Responsibility	Timeline	Expected Deliverables	Estimated cost / Resource needs	Way Forward
A. IFC Performance Standard 1								
1. 1	• A site-specific suitable checklist/ tracker to monitor legal requirements and other contractual	• The Company shall identify all legal requirements and other contractual obligations and monitor and track compliance of all the	**High**	Company Management Project Site Management	3 months	Legal compliance tracker	Management time only	• Ever Enviro Business specific ESGMS was finalized in February 2023 that includes HSE and IMS. The systems and procedures are diligently followed.

#	Nature of Non-Compliance	Recommended Action	Priority	Responsibility	Timeline	Expected Deliverables	Estimated cost / Resource needs	Way Forward
	obligations had not been developed.	legal regulations and contractual obligations.						• Check list / tracker / legal register has been developed
2.	• Grievance register is not maintained on site by the project team. • Stake holder Engagement program is also not available	• Any grievances reported by stakeholders shall be resolved and recorded in a grievance register on site by the Company.	**Medium**	Company Management Project Site Management	6 months	Grievance register	Management time only	• Grievance Register is developed and updated at the site. • Stake holder engagement program is also developed
B. Performance Standard 2: Labour and Working Conditions								
3.	• The workers appointed by the Contractors were provided with verbal communication on the work hours, wages, and other welfare benefits. • Sample appointment letter issued to the workers by the	• The latest minimum wage abstract in local language shall be displayed at strategic locations within the project site. • The appointment letter issued to workers by the contractor should communicate work hours, wages, and	**Medium**	Company Management Project Site Management Contractor's team	6 months	Dated photographs of abstracts displayed on site Copy of a sample appointment letter	Management time only	• Ever Enviro Business specific ESGMS was finalized in February 2023 that includes HSE and IMS. The systems and procedures are diligently followed. • Procedures pertaining to employee benefits are followed up during construction/operation

#	Nature of Non-Compliance	Recommended Action	Priority	Responsibility	Timeline	Expected Deliverables	Estimated cost / Resource needs	Way Forward
	contractor were not available for review.	other welfare benefits in local language.						phase as per the systems and procedures defined in the ESGMS
4.	• Procedures for addressing collective dismissals/ retrenchment have not been developed by the Company.	• The Company as part of the HR manual should develop a procedure for addressing collective dismissals/ retrenchment.	**Medium**	Company Management	6 months	Revised HR manual incorporating procedure for addressing collective dismissals/ retrenchment	Management time only	HR manual developed and procedures followed up as per the systems and procedures mentioned in the ESGMS.
5.	• The site consisted of very fine sand. Sprinkling of water was not carried out to minimize dust generation resulting from construction works.	• Regular sprinkling of water may be carried out to minimize dust generation resulting from construction works.	**Medium**	Project Site Management Contractor's team	3 months	Dated photographs	Management time Cost of water abstraction and hose for sprinkling water	Regular sprinkling of water is carried out to minimize the dust generation.
6.	• Usage of PPEs	• All workers should be given appropriate PPEs and should be	**Medium**	Company Management	3 months	PPE Register Dated photographs	Management time only	• Ever Enviro Business specific ESGMS was finalized in February

#	Nature of Non-Compliance	Recommended Action	Priority	Responsibility	Timeline	Expected Deliverables	Estimated cost / Resource needs	Way Forward
		trained on using/wearing PPE. • The usage of PPE should be monitored by safety officer or contractor as well as project site team. • The topic of PPEs should be covered regularly in the TBTs.		Project Site Management		Entry of PPE usage in worker's ID card TBT records		2023 that includes HSE and IMS. The systems and procedures are diligently followed. • Regular training to workers on health and safety aspects are provided to all workers. • TBTs are conducted regularly. • PPEs are provided adequately.
7.	• Certificates of employee trained in First Aid and Basic firefighting were not available for review.	• Certified first aiders to provide immediate relief in case of injury and certified firefighters should be available at project site. • Certificates should be maintained on site for records.	**Medium**	Company Management Project Site Management Contractor's team	6 months	Copy of training records	Management time Cost of training	Procedures pertaining to First Aid training, basic fire fighting and other Emergency response plan are followed up during construction/operation phase as per the systems and procedures defined in the ESGMS

#	Nature of Non-Compliance	Recommended Action	Priority	Responsibility	Timeline	Expected Deliverables	Estimated cost / Resource needs	Way Forward
C. IFC PS Performance Standard 3								
8. .	• Stack monitoring of the DG sets is not practiced till date.	• Stack monitoring shall be conducted for periodic monitoring of DG set stack emissions.	**Medium**	Project Site Management Contractor's team	3 months	DG set stack monitoring reports	Management time Cost of monitoring	Stack monitoring of DG set and any other stacks will be conducted as per the conditions mentioned in the CTE.
9.	• Only verbal communication was carried out to the third-party vendors to ensure that all permits and licenses were maintained.	• The company should collect a copy of required permits and licenses from all third-party vendors. • Compliance to all relevant E&S legal requirements should form the part of contract agreement.	**High**	Company Management Contractor's team	3 months	A copy of required permits and licenses	Management time only	• Ever Enviro Business specific ESGMS was finalized in February 2023 that includes HSE and IMS. The systems and procedures are diligently followed. • Procedures pertaining to contractor management and compliance to all E&S requirement with contractors are followed up during construction/operation phase as per the

#	Nature of Non-Compliance	Recommended Action	Priority	Responsibility	Timeline	Expected Deliverables	Estimated cost / Resource needs	Way Forward
								systems and procedures defined in the ESGMS
d. IFC PS Performance Standard 4- Community Health, Safety, and Security								
10.	• Potential threat to nearby school and communities due to construction activities • Foul odour and fly menace in the surroundings	• Barricading the site • Implementing odour & fly control mechanism surrounding the site	**Medium**	Company Management Contractor's team	1 month		Management time	Barricading has been done. Implementation of odour and fly control mechanism.
11.	• Disruption in the traffic due to deployment of vehicles	• Management of vehicular traffic in alignment with school timing	**Medium**	Company Management	1 month		Management time	Traffic is managed by security guards in alignment with school timings.

Legend:
ESAP – Environmental and Social Action Plan
IFC PS – International Finance Corporation's Performance Standards

6 E&S Categorization of the Project

As part of the review of environmental and social risks and impacts of a proposed investment, IFC uses a process of environmental and social categorization to reflect the magnitude of risks and impacts.

These categories are:

- **Category A**: Business activities with potential significant adverse environmental or social risks and/or impacts that are diverse, irreversible, or unprecedented.
- **Category B**: Business activities with potential limited adverse environmental or social risks and/or impacts that are few in number, generally site-specific, largely reversible, and readily addressed through mitigation measures.
- **Category C**: Business activities with minimal or no adverse environmental or social risks and/or impacts.

The Project is categorized as **Category B** given that it implements the recommended E&S Action Plan (ESAP) in a timely manner. Other reasons for assigned it is a Category B project includes:

- The activities during project construction and O&M phase are expected to result in environmental and social (occupational health & safety, labour welfare, community health & safety) impacts that are generally site-specific, largely reversible, and readily addressed through mitigation measures when implemented on time.
- The activities during construction and O&M phase are not expected to directly impact indigenous peoples, critical habitat, and cultural heritage; or result in involuntary resettlement.
- The activities under the project undertaken by the Company are not expected to result in any irreversible or unprecedented impacts.
- The company has all the required polices in place (documented E&S policy, prohibition on engagement of child labour, forced labour. Code of conduct, Whistle Blower Policy, etc.)
- The company has a nominated person in charge of EHS issues at Head Office. At project site, the company has a nominated person for EHS issues.
- The company has all the required regulatory requirements in place or is in the process of obtaining required licenses/permissions/certificates. However, these needs to be taken up on an urgent basis and completed as recommended in the ESAP.

ANNEXURE-I

LEGENDS	
DESCRIPTION	
ENTRY GATE	01
11KV/415V TRANSFORMER AREA	02
WEIGH BRIDGE CABIN	03
WEIGH BRIDGE	04
CASCADE	5A
COMPRESSOR AREA	5B
GAS CLEANING AREA	06
ADMIN BUILDING	07
MCC ROOM	08
FIRE WATER PUMP	09
FIRE WATER TANK	10
PRESS MUD STORAGE AREA	11

LEGENDS	
DESCRIPTION	
PLC + MCC ROOM	12
DIGESTOR#1	13
DIGESTOR#2	14
FUTURE DIGESTER	15
FEED PUMP PLATFROM	16
FEED TANK#1	17
FEED TANK#2	18
WINDROW AREA	19
LAGOON	20
MANURE SHED	21
SOLID LIQUID SEPERATOR	22
PARKING AREA	23

LEGENDS	
DESCRIPTION	
BIO GAS GEN SET	24
INTERNAL ROAD	25
GREEN BELT	26
HOTWATER GENERATOR	27
FLARE	28
SECURITY CABIN	29
MEDICAL ROOM AND WORKMEN TOILET	30
PRESS MUD RUN OFF PIT (7X7X3M)	31
WINDROW RUN OFF PIT (7X7X3M)	32
HIGH MAST LIGHT	33
COOLING TOWER AREA	34
STORM WATER RUN OFF PIT (7X7X3M)	35

NOTES:–

1. ALL DIMENSIONS ARE IN M.
2. ** INTERNAL ROAD WIDTH SHOWN IS WITH 1M SHOULDER IN BOTH SIDES AND AND CARRIAGE WIDTH 4M.

REV. NO	DATE	DESCRIPTION	STATUS	DETAIL ENGG. CONSULTANT PPD. BY	MECH.	CIVIL	ELEC.	C & I	APPD. BY	THERMAX PPD. BY	MECH.	CIVIL	ELEC.	C & I	APPD. BY
				CKD. BY						CKD. BY					
13	03.07.23	OVERALL LAYOUT UPDATED								AK	NP	RM	SK	SK	PR
12	24.03.23	FEED PUMP PLATFORM LAYOUT UPDATED								AK	AB	RM	SK	–	PR
11	03.02.23	RUN OFF PIT LAYOUT UPDATED								AK	AB	RM	SK	–	PR
10	09.01.23	OVERALL LAYOUT UPDATED								AK	AB	RM	SK	–	PR
9	14.12.22	OVERALL LAYOUT UPDATED								AK	AB	RM	SK	–	PR
8	29.09.22	LAGGON CORDINATES AND SIZE UPDATED								SJ	AB	RM	SJ		PR
7	22.09.22	APPROVED LAYOUT UPDATED FOR FUTURE ROAD AND ADDITIONAL ROAD								SJ	AB	RM	SJ		PR
6	14.09.22	LAYOUT UPDATED AS PER REVISED BOUNDARY								SJ	AB	RM	SJ		PR

OWNER : M/s LAKIMPUR KHERI RNG PVT. LTD, BALRAMPUR, U.P

CLIENT : M/s. EVERENVIRO RESOURCE MANAGEMENT PVT LTD

THERMAX BIOENERGY SOLUTION PVT LTD, PUNE, INDIA

TECHNOLOGY PARTNER: M/s. PRIMOVE ENGINEERING PVT, LTD., PUNE

DRAWN	SJ		14.09.22
DESIGNED	AB		14.09.22
CHECKED	AB		14.09.22
APPROVED	PR		14.09.22

PROJECT : 240 TPD PRES MUD BASED CBG PLANT

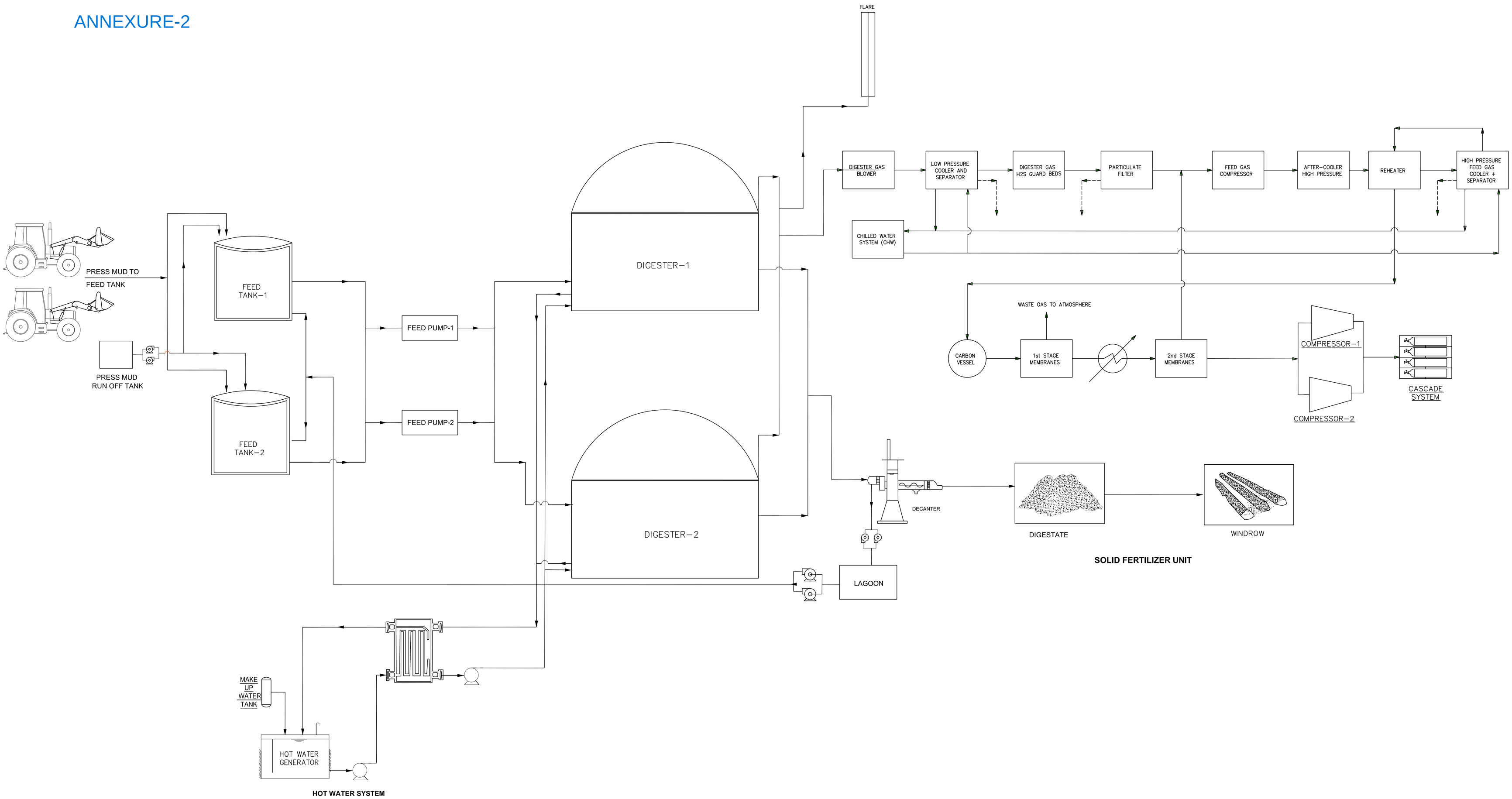
DEC :

GROUP: MECH | OC No.:DBG002 | SCALE: –

TITLE : OVERALL LAYOUT DRAWING

DWG.NO. TB 002 100 C 1 | REV. 13

ANNEXURE-2



REV. NO	DATE	DESCRIPTION	STATUS	PPD. BY	MECH.	CIVIL	ELEC.	C & I	APPD. BY	PPD. BY	MECH.	CIVIL	ELEC.	C & I	APPD. BY
					CKD. BY						CKD. BY				
				PRIMOVE ENGG. PVT. LTD.						THERMAX					

OWNER : M/s LAKIMPUR KHERI RNG PVT. LTD, BALRAMPUR, U.P

CLIENT : M/s. EVERENVIRO RESOURCE MANAGEMENT PVT LTD

THERMAX BIOENERGY SOLUTIONS PVT LTD.
PUNE, INDIA
THERMAX

DRAWN	PT		13.10.22
DESIGNED	AB		13.10.22
CHECKED	AB		13.10.22
APPROVED	PRM		13.10.22

PROJECT : 240 TPD PRES MUD BASED CBG PLANT

DEC :

GROUP: MECH | QC No: DBG002 | SCALE: –

TITLE : PROCESS FLOW DIAGRAM

DWG.NO. TB 002 213 M 1

REV. 0

IF IN DOUBT, PLEASE ASK