

EXECUTIVE SUMMARY
OF
ENVIRONMENTAL IMPACT ASSESSMENT
REPORT

**For The Proposed Common Bio-Medical Waste
Treatment Facility**

Promoted By

M/s. RAMNAD DOCTORS ASSOCIATION

At

Keelakottai Group, Muthuvayal Village,

Paramakudi Taluk ,

Ramanathapuram District,

Tamil Nadu.

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1. PROJECT DESCRIPTION

1.1 Introduction

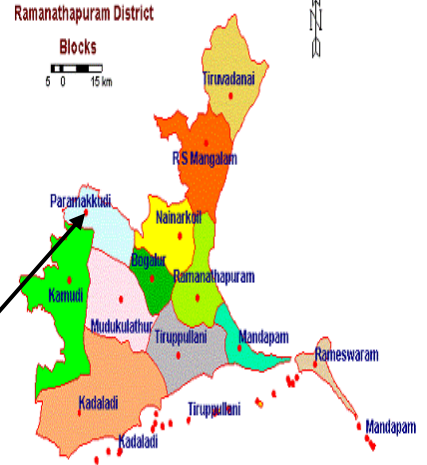
M/s. Ramnad Doctors Association has proposed a Common Bio-medical Waste Treatment Facility at S.F. No. 249/3, Keelakottai Group, Muthuvayal Village, Paramakudi Taluk, Ramanathapuram District. Common Bio-Medical Waste Treatment Facility is proposed to install a 500 kg/hr incinerator and other allied facilities for disposal of BMW. It is proposed to cover about 1,800 numbers of Health Care Establishments (HCE) and total bed strength will be 3,500 numbers. The quantum of bio-medical waste generating is about 3500 kg/day. The area of operation is Ramanathapuram district and part of Sivagangai District. The project falls under Category B1 schedule 7 (da) as per the MoEF & CC Notification dated 17th April, 2015 issued under the EIA Notification 2006. Project falls under Red category as per the categorization of Industry of CPCB/TNPCB.

1.2 Project Location

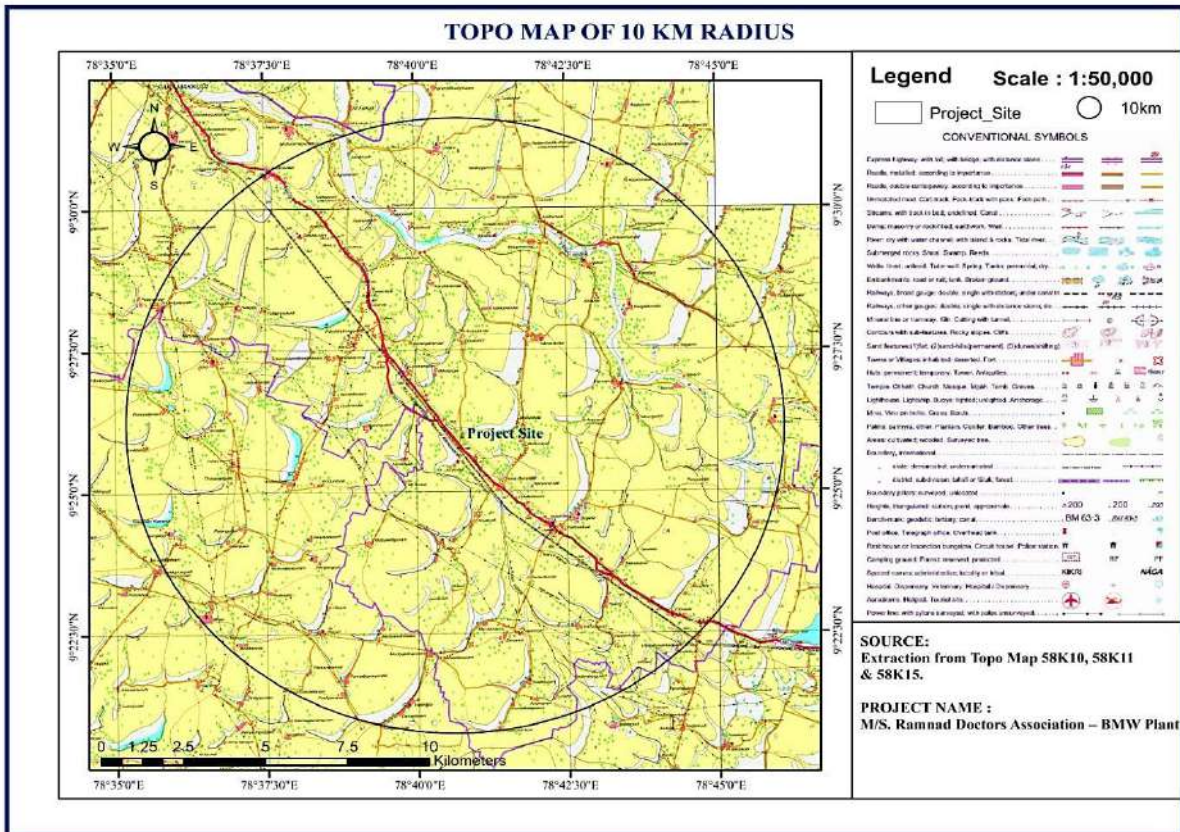
The plant is located in Unclassified Area of S.F. No. 249/3, Keelakottai Group, Muthuvayal Village, Paramakudi Taluk, Ramanathapuram District.

Connectivity

S. No.	Description	Details
1.	Nearest Highway	Paramakudi - Ramnad, NH- 49 at a distance of 0.5 km
2.	Nearest Railway Station	Sathirakudi Railway Station at 8.0 km from site
3.	Nearest Airport	Madurai International Airport at 130 km from project site
4.	Nearest Major City	Ramanathapuram - 18 km
5.	Nearest Village	Keelakottai Village - 0.7 km



Location Map of the Project Site





Satellite Imagery of the Project Site

Layout Coordinates	
A	9°26'8.42"N , 78°40'37.49"E
B	9°26'8.17"N, 78°40'39.42"E
C	9°26'12.90"N, 78°40'40.37"E
D	9°26'13.24"N, 78°40'39.08"E

1.3 Project Details

Bio-medical waste is generated from all Health Care Establishments (HCEs) like clinics, hospitals, nursing homes, veterinary institutions, animal houses, pathological laboratories, blood banks etc., The proposed project is a Common Bio-medical Waste Treatment Facility will have facilities as per the CPCB guidelines for collection, treatment and safe disposal of Bio-medical waste generated from these HCEs as per BMWM rules, 2016.

Project Overview

S. No.	Parameters	Description																		
1	Name of the project and location	M/s. Ramnad Doctors Association - BMW Plant located at S.F. No. 249/3, Keelakottai Group, Muthuvayal Village , Paramakudi Taluk, Ramanathapuram District.																		
2	Project Activity Schedule, Category as per EIA Notification 2006 & amendment	The project falls under Category B, schedule 7 (da) as per the MoEF&CC Notification No. S.O 1142 (E) dated 17 th April, 2015. The Proposed Common Bio-Medical Waste Treatment Facility (CBMWTF) attracts obtaining of the Environmental Clearance.																		
3	Plant Capacity	Capacity of CBMWF <table border="1"> <thead> <tr> <th>Equipment</th> <th>No.s</th> <th>Capacity</th> </tr> </thead> <tbody> <tr> <td>Incinerator</td> <td>1</td> <td>500 kg/hr</td> </tr> <tr> <td>Autoclave</td> <td>1</td> <td>600 lit./cycle</td> </tr> <tr> <td>Shredder</td> <td>1</td> <td>200 kg/h</td> </tr> <tr> <td>Sharp pit</td> <td>1</td> <td>5cum</td> </tr> <tr> <td>Effluent Treatment Plant</td> <td>1</td> <td>10 KLD</td> </tr> </tbody> </table>	Equipment	No.s	Capacity	Incinerator	1	500 kg/hr	Autoclave	1	600 lit./cycle	Shredder	1	200 kg/h	Sharp pit	1	5cum	Effluent Treatment Plant	1	10 KLD
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Effluent Treatment Plant	1	10 KLD																		
4	Number of HCE's covered	1800 numbers. Number of beds covered 3500 numbers.																		
5	Total Plot Area	1.89 Acres (7648.56 sq.m)																		
6	Area of operation	HCEs in Ramnad District & Sivagangai District																		

7	Source of Water	Local Panchayat Water Supply										
8	Water Requirement	Source: Local Panchayat Water Supply Water requirement - 9.0 KLD (Raw Water - 4.5 KLD and recycle - 4.5 KLD)										
9	Wastewater generation & mode of treatment	7.78 KLD Effluent - 7.5 KLD will be treated in 10 KLD ETP. Wastewater generated from the treatment of Bio-medical waste during autoclaving, washing of machines, vehicles and floors etc., will be treated in Effluent Treatment Plant and the plant will be operated on the principle of zero liquid discharge. Sewage - 0.28 KLD will be treated in septic tank followed by soak pit.										
10	Air Pollution Sources & control measures	DG set of 62.5 kVA with 3m stack height and acoustic enclosure will be provided.										
11	Hazardous & Solid waste generation	Organic solid waste - 0.6 kg/day Inorganic solid waste - 0.4 kg/day. Ash from the incinerator: 150 kg/d Disposed to TSDF.										
12	Man power	19 numbers										
13	Electricity/Power requirement	Power of 90 kW is supplied from TNEB.										
14	Land form, Land use and Land ownership	Unclassified Area										
15	Estimated Cost	<table border="1"> <thead> <tr> <th>Description</th> <th>Cost (lakhs)</th> </tr> </thead> <tbody> <tr> <td>Land Cost</td> <td>20</td> </tr> <tr> <td>Construction Cost</td> <td>25</td> </tr> <tr> <td>Plant & Machinery</td> <td>102</td> </tr> <tr> <td>Total</td> <td>147</td> </tr> </tbody> </table>	Description	Cost (lakhs)	Land Cost	20	Construction Cost	25	Plant & Machinery	102	Total	147
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Land Cost	20											
Construction Cost	25											
Plant & Machinery	102											
Total	147											

1.4 Raw Material Requirement

The proposed project is a Common Bio-medical Waste Treatment Facility (CBWTF) which caters handling and treatment of bio-medical waste. There is no production or manufacture of any products. Thus, there will be requirement of color-coded trolleys & bags, PPE's for workers, Diesel for operation of DG sets and incinerator, Necessary chemicals for Treatment etc., as raw material. Material Required for Treatment Facility is given in following table.

Material Requirement

S. No.	Particulars	Source	Quantity
1	Color Coded Trolley	Locally	Based on requirement
2	Non-chlorinated color-coded bags	Locally	Based on requirement
3	Diesel	Petrol bunk dealers	Based on requirement
4	Chemicals - Sodium hypochlorite, Caustic soda, Lime, Alum & Disinfectant	Locally	Based on requirement
5	Personal Protection Equipment (PPE's)	Locally from manufacturers	Based on requirement

1.5. Land Area Details

S. No.	Description	Area in sq.m	%
1.	Total plot area	7648.56	100
2.	Ground Coverage area	271.23	3.53
3.	Hard paved area including roads	390.00	5.07
4.	Greenbelt area	2524.02	32.83
5.	Parking	122.35	1.59
6.	Vacant & Others	4381.40	56.98

1.6 Plant Capacity

Proposed Treatment Plant Capacities

Equipment	Capacity	Number of equipment
Incinerator	500 kg/hr	1
Autoclave	600 lit./cycle	1
Shredder	200 kg/h	1
Sharp pit	5 Cu.m	1
Effluent Treatment Plant	10 KLD	1

1.7 Power Requirement

Total power requirement to the industry will be 90 kW, sourced from TNEB. DG set of 62.5 KVA will be installed at the site as power backup with adequate stack height and acoustic enclosures.

1.8 Existing Infrastructure

Roads: Ramanathapuram town is in south east Tamil Nadu and connected by NH 49 to Madurai from Rameswaram. East Coast Road is the major coastal road in east Tamil Nadu which connects the state capital Chennai and Ramanathapuram; this road also connects Ramanathapuram with Pondicherry, Tuticorin and Kanyakumari.

Port: Rameswaram Port is in Rameswaram Island of Ramanathapuram District. Pamban Port is an ancient Port in Ramanathapuram district, which connects East and West Coast of Indian Ocean borne via Pamban Channel (Pamban Pass). The port is located 109 km from the project site.

Railway Station: Ramanathapuram district has 2 railway stations namely Ramanathapuram railway station and Rameswaram railway station which a railway station is serving the town of Rameswaram located on the Rameswaram Island in the

district. It is belonging to the Madurai railway division and is an important terminal of the Southern Railway zone.

Power This region is all set to emerge as one of the top power producers in the State with the establishment of a 4,000-MW thermal power plant in Kadaladi. Adani Green Energy (Tamil Nadu) Ltd unveiled the World's largest solar power plant at a single location of 648 megawatts (MW) at Kamuthi, Ramanathapuram in Tamil Nadu. The Tamil Nadu Generation and Distribution Corporation (TANGEDCO) have also started work for setting up a 1,600-MW coal-based thermal power plant at Uppur near Thiruvadanai.

Communications: There are 300 post offices in the district. As per 2011 census, the percentage of people using mobile phones in the district was 66.07% and the percentage of people using land lines were 5.59%. All the major telecom service providers provide telephone and cellular phone services throughout the District.

Financial Institutions: Ramanathapuram district is well served by a network of 209 banks. They include 88 nationalized banks, 21 Scheduled banks, 28 Grama banks, 58 Agricultural banks and 14 Mortgage banks.

2. DESCRIPTION OF ENVIRONMENT

Study Period - Monitoring was carried out from April, 2022 - June, 2022. The results have been summarized below:

2.1 Air Quality

Particulate Matter (PM₁₀) -The study reveals that maximum concentration was observed to be 33µg/m³. The highest 24-hourly concentration was recorded at Keelakottai location. The average concentration of PM₁₀ can be said to be ranged between 22.5-40.5 µg/m³.

Particulate Matter (PM2.5) - The maximum of PM2.5 (23.2 $\mu\text{g}/\text{m}^3$) during the study period was recorded at Keelakottai, whereas the minimum value (7.9 $\mu\text{g}/\text{m}^3$) concentration was recorded at Palankulam.

Sulphur Dioxide (SO2) - The ambient air monitoring results indicates that the lowest concentration of SO2 is experienced at Palankulam (1.3 $\mu\text{g}/\text{m}^3$). The average concentration of SOX recorded during the study period ranged between 2.1-4.2 $\mu\text{g}/\text{m}^3$ respectively.

Oxides of Nitrogen (NOx) - The highest value of NOX during the monitoring period was observed at Ulaiyur (1.85 $\mu\text{g}/\text{m}^3$) while the minimum value was recorded at Palankulam (0.65 $\mu\text{g}/\text{m}^3$). The average concentrations were in the range of 1.05-2.25 $\mu\text{g}/\text{m}^3$.

2.2 Noise Levels

Project Site

The ambient noise level at the project site during day is 42.8 dB (A) which is within the standard limit of industrial area 75 dB (A). During the night time, the noise level is 33.7 dB (A) which is also within the standard limit of industrial area 70 dB (A).

Locations within 5km Radius (N4, N6, N8)

The ambient noise levels at the following locations during day time vary from 28.6 to 39.3 dB (A) which is within the standard limit of residential area 55 dB (A). During the night time, the noise level ranges from 16.3 to 22.8 dB (A) which is also within the standard limit of residential area 45 dB (A).

Locations above 10km Radius (N2, N3, N5, N7)

The ambient noise levels at the following locations during day time vary from 25.6 to 29.3 dB (A) which is within the standard limit of residential area 55 dB (A). During the night time, the noise level ranges from 16.4 to 23.8 dB (A) which is also within the standard limit of residential area 45 dB (A).

2.3 Water Quality

Analysis results of ground water reveal the following,

- pH varies from to 7.1 to 7.6
- Electrical Conductivity ranged from 1114 to 1970 $\mu\text{S}/\text{Cm}$
- Total Hardness varies from 304 to 604 mg/L.
- Total Dissolved Solids varies from 724 to 1300 mg/L.
- Chlorides varies from 51 to 138 mg/L
- Fluorides are in Below Detection Limit

Analysis results of surface water reveal the following,

- pH varies from to 7.1 to 7.3
- BOD varies from 5.24 to 11.00 mg/L
- COD varies from 17 to 42 mg/L
- DO varies from 4.3 - 4.4 mg/L
- Total Coliforms varies from 1200 - 1300 MPN/100ml
- Fecal Coliforms carries from 800 - 900 MPN/100ml

2.4 Soil Quality

- The analysis results show that soil is Slight to Moderate Alkaline in nature as pH value ranges from 6.3 to 6.9.
- The Nitrogen concentration was ranged between of 217.5 to 313.8 Kg/ha indicating that the soils have good to better quantity of Nitrogen.
- The concentration of Phosphorus is recorded in the range of 11.4 to 18 Kg/ha. indicating the soils have less to medium quantity of Phosphorus.
- The concentration of Potassium is recorded in the range of 96.4 to 168 Kg/ha which shows that the soils have medium to better quantity of potassium.

2.5 Ecology

The site is proposed in a remote dry agricultural and predominantly barren lands covered with some thorny bushes in patches. There is no tree cutting or removal of plantations is anticipated. There is no forest land is involved. There is no Wild Life Sanctuary or National Park or Biosphere or Hotspots within the study area of 10 km.

2.6 Land Use Classification

S. No	Classification	Area (Ha)	
		2005-06	2019-20
1	Geographical Area	408957	
2	Forests	4488	4488
3	Barren & Uncultivable Lands	4591	4457
4	Land put to non-agricultural uses	84483	91106
5	Cultivable Waste Lands	4245	3360
6	Permanent Pastures & other grazing lands	154	154
7	Groves not included in the area sown	41210	30957
8	Current Fallows	27784	51507
9	Other Fallow Lands	56439	45124
10	Net Area sown	185563	182261

3. ANTICIPATED IMPACTS & MITIGATION MEASURES

3.1 Ambient Air

During the installation phase, impacts on ambient air would be mainly due to dust emissions and movement of vehicles. However, these impacts would be short term in nature and limited only to the construction period. Dust suppression systems (water spray) will be used. Construction materials shall be fully covered during transportation to the project site by road.

During the operational phase, Air Pollution Control devices will be installed for final flue gasses trapping. To control emissions from incinerators of 500 kg/hr shall be provided. Chimney (30 m above ground level) will be provided from the incineration process. Stack monitoring shall be done on a regular basis for NOX, SO₂ and PM parameters. For mitigation of impacts of air pollution, stack height of 4 m above roof level shall be provided for proposed D.G. sets of capacity 1 x 62.5 kVA.

3.2 Water Environment

Total water requirement for proposed project is 9 KLD. Source of fresh water will be sourced from Local Panchayat supply. Total waste water generated in the project will be 7.78 KLD which will be treated in ETP with a capacity of 10 KLD. All the treated wastewater will be recycled; no untreated/treated water will be discharged. It will be a zero liquid discharge project. Collection of effluent will be done properly and safely. It will be a zero liquid discharge unit. Waste water generated will be treated in ETP. All the treated water will be used in the process; no untreated/treated water will be discharged.

3.3 Land Environment

Presently, the land is vacant. The site falls under Unclassified Area. The land area has been given purchased by M/s. Ramnad Doctors Association. The excavated soil from excavation will be used for backfilling and excess will be sent to the landfill site. During the operational phase, procedures for the maintenance of equipment would ensure that this risk is minimized and clean-up response is rapid if any spill occurs. During spillage if any occurs, the spill will be collected and disposed off properly. In case of spills of chemicals, dry adsorbents/cotton should be used for cleaning instead of water. Spillage will be managed by detection of leaks in the first place from structures or vessels.

3.4 Noise Levels

Some amount of noise will be generated from vehicular movement in the installation/construction. Green belt developed at the periphery of the project site will act as a barrier to noise. Machines having high standards shall be deployed so that minimum levels of noise & vibrations are produced during the construction work with excavators having vibration isolators. Silencers provided in the machines to modulate the noise generated by machines will be regularly checked for its effectiveness. For noise pollution control, the D.G. sets will be kept in acoustically treated room though the DG sets are used as standby only. Noise generating units like machinery area, canteen etc. are well insulated with enclosed doors. Earmuffs will be used while in high noise areas. Stationary machineries and equipment will be properly enclosed by enclosures and will be provided with dampeners for minimizing noise generated due to vibration of machineries

3.5 Solid Waste Management

During the construction, whatever quantity of construction waste is generated shall be stacked and disposed off at the designated disposal site and care shall be taken to

ensure that temporary stacking and transportation shall not cause any disturbance to the surrounding environment. Approx. 4 kg/day of solid waste will be generated and shall be disposed off at Solid waste Disposal Site.

During Operation, the incinerated ash and the ETP sludge are the Hazardous waste generated. The generation of incineration ash will be about 0.3 kg/d and the same will be handed over to TSDF. ETP sludge is also handed over to Authorized recycler.

- Plastic wastes are disinfected, disintegrated/shredded and handed over to recyclers
- Sharps are disinfected, shredded and encapsulated
- Glass waste will be disinfected and handed over to recyclers

Domestic solid waste generated is minimal say 1.0 kg/day (for 7 number of employees) of which 60% (0.6 kg/day) is organic and 40% (0.4 kg/day) is inorganic waste, which will be segregated at source, collected in bins and disposed.

3.6 Socio-Economic Environment

No rehabilitation and resettlement is required for the proposed project. Employment opportunities will be generated for the local population during the construction/installation phase. Approx. 40 labors shall be deployed during the installation phase. During Operation phase, there will be an employment of approximately 19 skilled & unskilled personnel.

4. ENVIRONMENTAL MANAGEMENT PLAN

4.1 Water Consumption

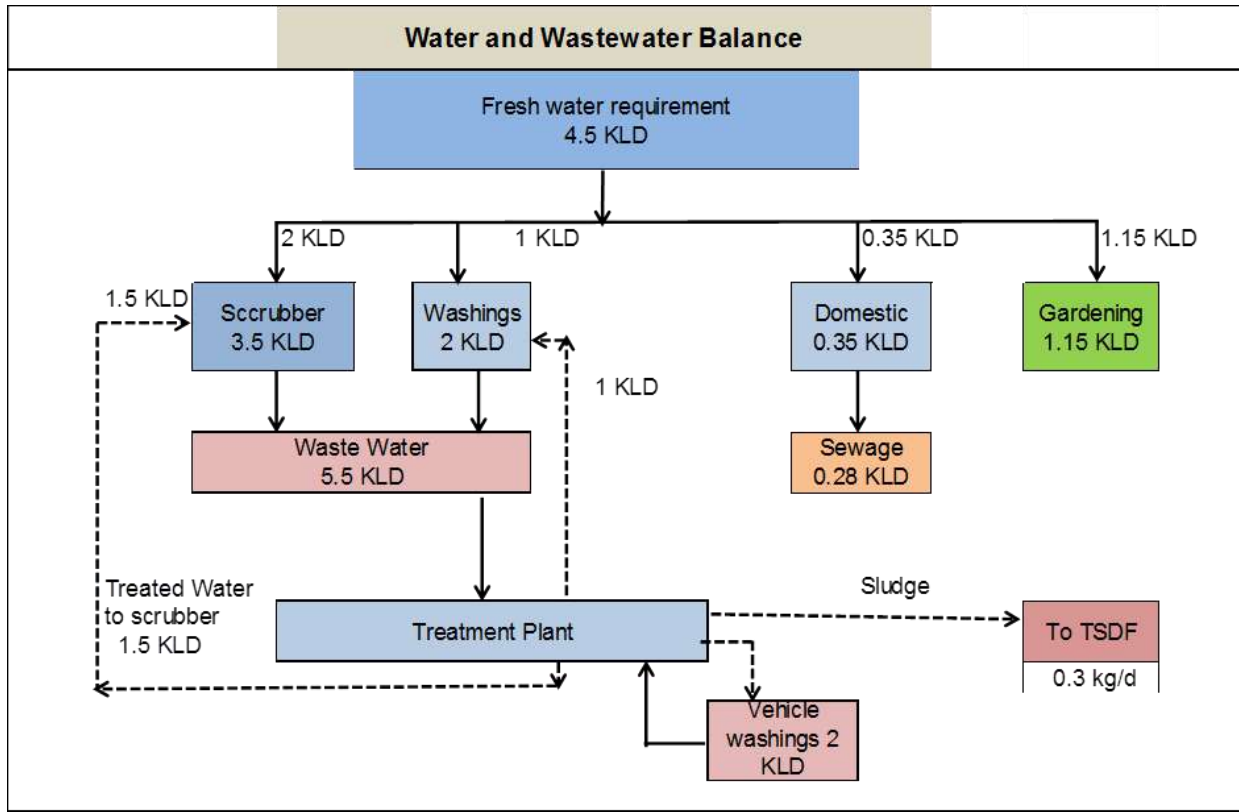
Total water requirement for proposed project is 9 KLD. Source of fresh water will be sourced from Local Panchayat water supply.

Sl. No.	Purpose	Water requirement KLD
1.	Domestic	0.35
2.	Scrubber	3.50
3.	Washing	2.00
4.	Vehicle washing	2.00
5.	Gardening	1.15
Total		9.00

4.2 Wastewater Generation

Sl. No.	Purpose	Wastewater generation (KLD)	Mode of Treatment
1.	Domestic	0.28	The wastewater from process will be treated in ETP of 10 KLD and reused for scrubber. Hence, following Zero Liquid Discharge system. The sewage water will be treated in septic tank followed by soak pit.
2.	Scrubber	3.50	
3.	Washing	2.00	
4.	Vehicle washing	2.00	
5.	Gardening	-	
Total		7.78	

4.3 Water Balance Chart



4.4 Air Pollution Control Measures

Stack attached to	Capacity	Fuel HSD Quantity l/h	Stack Height AGL - m	APC Measures	Emissions
Incinerators	500 kg/hr	80	30	Venturi Scrubber	PM, NO ₂ , HCL Hg and its compounds Total dioxins and Furans
DG sets	62.5 KVA	27	4	Acoustic Enclosure	SO ₂ , NO _x

4.5 Solid & Hazardous Waste Management

The incinerated ash and the ETP sludge are the Hazardous waste generated. The generation of incineration ash will be about 0.3 kg/d and the same will be handed over to TSDF. ETP sludge is also handed over to Authorized recycler.

- Plastic wastes are disinfected, disintegrated/shredded and handed over to recyclers
- Sharps are disinfected, shredded and encapsulated
- Glass waste will be disinfected and handed over to recyclers

Domestic solid waste generated is minimal say 1.0 kg/day (for 7 number of employees) of which 60% (0.6 kg/day) is organic and 40% (0.4 kg/day) is inorganic waste, which will be segregated at source, collected in bins and disposed.

4.6 Greenbelt Development

Green belt planning shall be done as per guidelines laid by CPCB. This will help in increasing the aesthetic effect of the environment. Green belt/greenery will be developed along most of the periphery of the project area as well as along roads.

Total 2524.02 (32.83% of plot area) shall be developed as green area. Any sapling that does not survive will be replaced.

S. No.	Botanical Name	Common Name	Site	No.
1	<i>Acacia auriculiformis Benth</i>	Earleaf Acacia	A1	100
2	<i>Azadirachta indica A.Juss.</i>	Neem	A1	150
3	<i>Terminalia catappa L.</i>	Baadam Tree	A2	50
4	<i>Mimusops elangi L</i>	Spanish Cherry	A3	50
5	<i>Tectona grandis L.f.</i>	Teak Tree	A1	40
6	<i>Derris indica (Lam.) Bennett</i>	Pongam Oil Tree	A2	100
7	<i>Ficus benjamina L</i>	Weeping Fig	A3	60
8	<i>Caesalpinia pulcherrima L Swartz</i>	Peacock Flower	A3	80
Total				630

5. ENVIRONMENTAL MONITORING PROGRAMME

5.1. Environmental Monitoring

Environmental policy at Industry level is yet to be defined formally. Standards are stipulated by various regulatory agencies to limit the emission of pollutants in air and water. Similarly, a mandatory practice is recommended for preparing an Environment Statement each year in order to encourage the industries to allow efficient use of resources in their production processes and reduce the quantities of waste per unit of product. This in itself is not sufficient since this does not provide an assurance that its Environmental performance not only meets, will continue to meet, legislative and policy requirements.

5.2 Environmental Monitoring Plan during Construction Phase

S. No.	Type of Monitoring	Frequency of Monitoring	Parameter	Location
1	Ambient Air Quality	Monthly	Particulate Matter (PM _{2.5}) Particulate Matter (PM ₁₀) Sulphur Dioxide (SO ₂) Nitrogen Oxides (NO ₂)	Four Locations in and around the project site
2	Stack	Monthly	Particulate Matter, Sulphur Dioxide (SO ₂), Nitrogen Oxides (NO _x)	DG sets of 1x 62.5kVA
3	Water Quality drinking water	Monthly	All parameters mentioned in IS:10500	One drinking water sample
4	Water Quality for Construction purpose	Monthly	All parameters mentioned in IS:456	One construction water sample
5	Ambient Noise Level	Monthly	Day and Night noise level	Two locations
6	Noise Level	Monthly	Leq Day & Night	DG set of 1x 62.5 kVA
7	Soil Quality	Monthly	All parameters to check soil Fertility	Four Locations in and around the project site

5.3 Environmental Monitoring Plan during Operation Phase

S. No.	Type of Monitoring	Frequency of Monitoring	Parameter	Location
1	Ambient Air Quality	Monthly	Particulate Matter (PM _{2.5}), Particulate Matter (PM ₁₀), Sulphur Dioxide (SO ₂), Nitrogen Oxides (NO ₂), Carbon Monoxide (CO)	Four Locations around project site
2	Work Area-Air Monitoring	Monthly	HCl, Dioxins & Furans	Plant & machinery area
3	Stack	Monthly Monthly	Particulate Matter, Sulphur Dioxide (SO ₂), Nitrogen Oxides (NO ₂) Incinerators, boiler & DG Sets HCl, Dioxins & Furans Incinerators	Boiler Stack DG sets of 1×62.5kVA and Incinerators Stack
4	Water Quality for drinking water	Monthly	All parameters mentioned in IS:10500	One drinking water sample
5	Effluent Treatment Plant or other treatment	Monthly	pH, BOD, COD, TDS, TSS, Chloride, Sulphate, Total Hardness, Oil and Grease, Zinc.	Inlet and Outlet of ETP
6	Ambient Noise Level	Monthly	Day and Night noise level	Two locations
7	Work Area-Noise Monitoring	Monthly	Leq Day & Night	Boiler, Plant & machinery area (Incinerators, Autoclave & Shredder) One monitoring at every place
8	DG Set Room	Monthly	Leq Day & Night	DG sets of 1×62.5kVA
9	Soil Quality	Monthly	All parameters to check soil Fertility	Four Locations in and around project site

5.4 Risk Assessment

The project is situated in the Seismic zone-II area. Special attention has been given to the structural design of foundation, elements of masonry, timber, plain concrete, reinforced concrete, pre-stressed concrete, and structural steel. All applicable guidelines have been followed in this regard to ensure the safety of the building. To avoid flooding or water logging in the area due to the existing nearby canal & lake, proper designing of drainage system for storm water shall be done. All the rainwater will be diverted to rain water storm water drain and extra water will be diverted in the storm line of the area.

General Safety Measures

- a. Occupational health surveillance programme shall be done six monthly & and their records shall be maintained.
- b. Company will take reasonable steps to reduce the risk of exposure to infection by establishing written policies and procedures based upon the currently accepted clinical and occupational health and safety information in consultation with workers, handling and disposing of biomedical waste. These policies and procedures will be reviewed and updated regularly, with compliance to their requirements verified as necessary.
- c. Regular assessment of waste management procedures shall be done to assure compliance with applicable standards
- d. A written procedure to handle and report needle stick injuries and other waste-handling incidents shall be there. Injuries caused by needle sticks and sharp instruments will be documented, reviewed, and changes implemented to prevent similar incidents in the future;
- e. Emphasize the need for point of generation segregation so that waste shall be placed within an appropriate waste container.
- f. Type and quality of waste containers will be reviewed regularly, if necessary it will be upgraded to more suitable container;

- g. Handling practices will be reviewed regularly to determine problems of inappropriate handling. If so, modify the handling techniques. At the project site in case of emergency First Aid facility shall be provided.
- h. Health check-up camps shall be organized on a regular basis at company dispensary / nearby locations.

5.5. Budget Allocation for Environmental Management Programme

S. No.	Particulars	Capital Expenditure (Rs. In Lacs)	Recurring Expenditure (Rs. In Lacs/year)
1	Landscaping/ Plantation	3.00	0.20
2	Solid Waste Management	4.00	0.55
3	Waste Water Management/ETP	7.00	0.75
4	APCS Management	9.50	2.50
5	Environment Monitoring	0.75	0.35
6	Miscellaneous	1.00	0.50
Total		25.25	4.85

5.6. Budget Allocation for CER Activities

Sl. No.	Activity	Fund allocated (Rupees in Lakhs)
1.	Health and Education to nearby villages	2.5
2.	Electrification including solar power	0.5
3.	Toilet facility to nearby government school	2.0
4.	Supporting the nearby village panchayat to erect an electric crematorium	15.0
Total		20.00