

Executive Summary

1. Project Details

Medical care is vital for our life and health, but the waste generated from medical activities presents a real problem. Improper management of waste generated in health care facilities causes a direct health impact on the community, health care workers, and the environment. Indiscriminate disposal of biomedical waste (BMW) or hospital waste and exposure to such waste pose serious threats to the environment and human health; hence, such waste requires specific treatment and management prior to its final disposal. Awareness about the need of BMW management among the health care personnel is of paramount importance.

M/s. Touch & Glow proposed for expansion of existing Common Biomedical Waste Treatment Facility (CBMWTF) at Plot No. 30, BIDCO Industrial Estate, Chintupada, Palghar, Maharashtra from 3.15 MTPD to 13.95 MTPD.

The existing facility is established in an area of 3,941 sqm at Plot No. 31 BIDCO Industrial Estate, Chintupada, Palghar. Currently, the CBMWTF has the following key components:

(a) Incinerators – 1 nos. x 75 kg/hr. capacity, with all necessary air pollution control devices to comply with the emission standards, (b) Autoclave – 1 nos. x 50 Ltrs/Batch and (c) Shredders – 1 no. x 50 kg/hr.

In addition to the existing infrastructure, it is proposed to establish: (a) 1 nos. x 200 kg/hr. Incineration Facility, in compliance with standards mentioned in Schedule II of Bio-Medical Waste Management Rules, 2016 and CPCB guidelines, (b) Autoclave – 1 nos. x 200 Ltrs/Batch and (c) Shredder – 1 no. x 200 Kg/Hr. Additional 360 sqm area will be required for the proposed expansion project. The total area after expansion will be 4,301 sqm.

Total Project Cost: INR 2.67 Cr. (Existing: INR 97 Lac; Proposed: INR 1.70 Cr.).

Terms of Reference (TOR):

The project proponent applied for EC, and the Terms of Reference (TOR) were issued with reference:

- a. File No.: SIA/MH/INFRA2/496476/2024
- b. TOR Identification No.: TO24B3301MH5519401N Dated: 1st October 2024.

An amendment to the EIA Notification, 2006 (vide S.O. 1142(E) dated 17th April 2015)

classified CBWTFs under Activity 7(da), Category 'B'.

2. Project Requirement

The general break down of the requirement of the project is as follows.

Table 1.0 : Project Requirements

| Particulars | Details | | | |
|-------------------------|---|----------------------|--------------------|-----------------------------------|
| Total area of the Plant | Existing Area:3941 sqm (Plot No. 31 BIDCO Industrial Estate, Chintupada, Palghar) Proposed:360 sqm (Plot No. 30, BIDCO Industrial Estate, Chintupada, Palghar) Total Area after expansion: 4,301 sqm | | | |
| Location of the Plant | Plot No. 31, BIDCO Industrial Estate, Chintupada, Palghar, Maharashtra. | | | |
| Capital Cost | Rs 1.70 Cr. | | | |
| Coordinates of the Site | Latitude: 19°40'23.21"N Longitude:72°45'25.05"E | | | |
| Project Capacity | Facility | Capacity and numbers | | |
| | | Existing | Proposed | Total |
| | Incinerator | 1 X 75 Kg/Hr | 1 X 200 Kg/Hr | Number: 02 Capacity: 275 Kg/Hr |
| | Autoclave | 1 X 50 Ltrs/Batch | 1 X 200 Ltrs/Batch | Number:02 Capacity:250 Kg/Hr |
| | Shredder | 1 X 50 Kg/Hr | 1 X 200 Kg/Hr | Number:02 Capacity:250 Kg/Hr |
| | Treatment capacity of the facility | 3.15 MTPD | 10.80 MTPD | 13.95 MTPD |
| Water requirement | Existing :5 KLD Proposed: 10 KLD Total Water Requirement after expansion: 15 KLD | | | |
| ETP Details | Existing Capacity: 5 KLD Proposed Capacity:10 KLD Total Capacity after expansion: 15 KLD | | | |
| Power Requirement | Existing :27 HP Proposed :25 HP Total Power Requirement after expansion: 52 HP | | | |

| Particulars | Details |
|---|---|
| Source of Power | Power Corporation |
| D.G. Set Capacity with stack height (as stand by) | Existing: 20 kVA with stack height 1.5 m Proposed: 40 kVA with stack height 1.5 m |
| Manpower requirement | Existing: 40 Proposed: 20 Total Manpower after expansion: 60 |
| Greenbelt / Plantation Area | Existing green area : 150 sqm. Proposed additional green area: 1500 sqm. Total Green area = 1650 sqm. |
| EMP Budget | EMP budget (Construction Phase): Recurring Cost: Rs 190000/- EMP budget (Operational Phase): Capital cost: Rs. 20 lacs Recurring cost: Rs 600000/-. |
| CER Budget | Rs 17.0 Lacs |

3. Waste Water Generation

Entire waste water generated from the facility will be treated through proposed ETP and treated water will be use development of internal green belt development purposed to follow zero discharge concept. Domestic wastewater will be treated /disposed off through septic tank/soak pit. The wastewater generated from process will be treated/recycled. This is a zero liquid discharge (ZLD) process & will not discharge outside the premises.

Existing Wastewater generation is 4 KLD and this will be treated in ETP of 5 KLD capacity. After expansion total wastewater generation will be 7.5 KLD and treated in ETP of 10 KLD capacity.

4. Air Emission & Air Pollution Control Measures

The air emission from the proposed facility would be PM, SO₂, NO_x and HCl from Incinerator stack. To control air emission of existing & proposed project APCS i.e Venturi scrubber & Cyclone as a pollution control system with adequate stack height is already being installed and same shall be installed for expansion.

Pollution Control Measures:

- **Air Pollution Control Systems (APCS):**

Stack height: 30 m above ground level.

Emission control via Quencher, Venturi Scrubber, Packed Bed Scrubber, and Mist Eliminator.

Use of NaOH solution to neutralize flue gases.

- **Noise Pollution:**

DG Sets enclosed acoustically.

Insulation of noise-generating units.

- **Fugitive Emissions:**

Regular maintenance of pollution control devices.

Green belt development along boundary walls.

5. Solid Waste Generation & Disposal

Incineration ash, Domestic waste and ETP sludge will be generated from proposed facility.

Incineration ash and ETP sludge will be disposed to CHWTDF and domestic waste will be handover to the Municipal Corporation after collection/segregation at site.

Waste Treatment and Disposal

- **Autoclaving Process:**

- Autoclaved waste will be shredded and sent to authorized recyclers.
- Sharps will be encapsulated post-autoclaving.
- Glass bottles will be disinfected and sold to recyclers.

- **Ash and Residue Management:**

- Existing ash generation: 25 MT.
- Post-expansion ash generation: 40 MT.
- Total ash: 65 MT (disposal at CHWTDF, Taloja).

- **Incinerable Waste:**

- Loaded into the incinerator for treatment.
- Residual ash will be sent to CHWTDF, Taloja.

6. Baseline Environment

The baseline environmental quality of Air, water, soil, noise, socioeconomic status and ecology has been assessed in the period of 1 Jan 2025 to 31 March 2025 in a study area of 10 km radial distance from the project site. The base line data has been collected by M/s Nilawar Laboratories, Nagpur (NABET Accreditation Lab Vide –TC -9782) & Monitoring stations were selected by Laboratory experts in coordinator with EIA Coordinator. The ambient air quality monitoring was carried out at 8 locations to monitor PM10, PM2.5, SO2 and NOx concentration, which are found well below the NAAQS of CPCB. Total 8 nos. of ground, 6 no.s surface water samples & eight soil samples were collected from the study area. The result of the all water sample collected shows that the water quality of the area is good. Values of the parameters found within the permissible limit of Indian standards/specifications for Drinking water. Background noise levels were measured at 8 locations. Noise levels found within norms at all the location. Land use within 10 km radius of the study area has been determined with the help of satellite imagery, and broadly consists of settlements, Industrial land, Tank/River, land with scrub, land without scrub, area and predominant land use. During the eco-biological study, endangered and endemic species is not observed in the study area. The population of Palghar district in 2023 is estimated to be around 29,90,116. All the villages were having almost all the infrastructure facilities like, educational, drinking, sanitation, health, etc.

7. Environmental Impacts during Construction Phase

During construction phase there will be minor reversible impact envisage on the air, water and noise environment.

8. Environmental Impact during Operation Phase & Mitigation Measures

Due to this proposed project, there will be minor increment in the air pollution due to the air emissions like, PM, SO2, NOx and HCl from the stake attached to incinerator facility. Entire waste water generated from the process will be reused for the internal green belt development to follow Zero discharge concept. Solid waste generated in the form of incineration ash, domestic waste and ETP sludge will be disposed as per guideline to reduce impact on soil environment. A regular monitoring of the environment parameters like air, water, noise and soil, etc. will be carried out periodically as recommended.

9. Environmental Monitoring Programme

Environmental monitoring is an essential component of sustainable project management, aimed at ensuring compliance with regulatory standards and minimizing the environmental impact of development activities. Environmental Monitoring Program (EMP) designed for the project to systematically assess and manage environmental parameters during construction and operational phases.

During construction phase Environmental Monitoring Plan is given for twice in a year for Ambient Air Quality, Ambient Noise Level, Soil quality, Ground Water and during operational phase Air, soil, noise, ground water, surface water, wastewater, stack, incinerator monitoring will be done twice in a year as per CPCB guidelines.

Work zone monitoring shall be carried out by the HSE department every month for gaseous pollutants (Dioxins & Furans). Records will be kept. Location for sampling shall be identified. Samples will be analysed for Dioxins & Furans.

Three-stage health-monitoring program is proposed. Monitor the health of workers within the project site to identify adverse health effects. Periodically obtain feedback from local doctors regarding any potential indicators of adverse health effects due to environmental cause in the communities surrounding, and particularly down-stream of the landfill. By organizing health camps on a regular basis.

10. Additional Studies

“Public Consultation” or “Public Hearing” refers to the process by which the concerns of local affected persons and others who have plausible stake in the environmental impacts of the project or activity are ascertained with a view to taking into account all the material concerns in the project or activity design as appropriate. In view of the above and as compliance to TOR issued by SEIAA, draft EIA Report has been prepared for public hearing consultation. The company has a written policy for the safety, Health and Environment Management.

The proposed project is a brown field project hence 1% (Rs 17.0 Lakhs) of the total project cost (Rs.1.70 Crore) will be earmarked for CER Budget.

Table 2.0: CER Budget

| Sl.No. | Activity | Year (Rs In Lakhs) | | | Total Expenditure (Rs. In Lakhs) |
|--------|--|--------------------|-----|-----|----------------------------------|
| | | 1st | 2nd | 3rd | |
| 1 | Renovation of primary School building for basic necessities like sanitation, drinking water & solar light plays area for children in school. | 3.0 | 2.0 | 1.0 | 6.0 |
| 2 | Development of computer centre & maintenance of approach road | 3.0 | 2.0 | 1.0 | 6.0 |
| 3 | Adoption of municipal park for maintenance and green belt development | 2.0 | 2.0 | 1.0 | 5.0 |
| | Total | 8.0 | 6.0 | 3.0 | 17.0 |

11. Project Benefits

The proper bio-medical waste management will help to control nosocomial diseases (hospital acquired infections), reduce HIV/AIDS, sepsis, and hepatitis transmission from dirty needles and other improperly cleaned / disposed medical items, control zones (diseases passed to humans through insects, birds, rats and other animals). Like cancer, from the environmental release of toxic substances such dioxin, mercury and others.

The project will lead to indirect and direct employment opportunity. Employment is expected during construction and operation period, waste lifting and other ancillary services. Employment in these sectors will be temporary or contractual and involvement of unskilled labor will be more.

12. Environmental Management Plan

The management team is very much concern about environmental issues. All the environmental components will be looked out by Environmental Management Cell (EMC). Mitigation of environmental impacts has to be implemented according to the suggestions and will be monitored regularly to prevent any lapse. Company has committed to implement all the pollution control measures to protect the surrounding environment. The project can definitely improve the regional, state and national environment and reduce health hazards. Projects like this will certainly improve the living standard of local people. The

implementation of this project will definitely improve the physical and social infrastructure of the surrounding area.

The proposed project is a brown field project. The EMP budget during construction phase will be Rs 190000/- (recurring cost). The total estimation for capital cost of Environmental Management Plan (EMP) during operational phase will be indicated to be Rs. 20 lacs & recurring cost is Rs 600000/-.

Table 3.0: The EMP budget during construction phase

| Component | Recurring Cost (Rs/ Annum) |
|----------------------------|----------------------------|
| Water for Dust Suppression | 25000 |
| Site Sanitation | 20000 |
| Labor Health Check UP | 10000 |
| Labor Welfare | 100000 |
| Wheel Washing | 5000 |
| Waste Storage Bins | 5000 |
| Environment Monitoring | 25000 |
| Total | 190000 |

Table 4.0 : The EMP budget during operation phase

| S.No | Title | Capital Cost | Recurring Cost |
|------|--|----------------|----------------|
| 1 | Pollution Control during construction stage | 1.0 | - |
| 2 | Air Pollution Control Device(Installation of APCD) | 6.0 | 300000 |
| 3 | Water Pollution Control | 5.0 | 125000 |
| 4 | Green Belt Development | 0.5 | 25000 |
| 5 | Noise Pollution Control | 1.5 | 50000 |
| 6 | Solid/Hazardous Waste Management | 2.0 | - |
| 7 | Environment Monitoring & management | 2.0 | - |
| 8 | Occupational Health, Safety &Risk Management | 2.0 | 100000 |
| | Total | 20 lacs | 600000 |
