

**BEFORE THE NATIONAL GREEN TRIBUNAL,
PRINCIPAL BENCH, NEW DELHI.**

APPEAL NO. 06/ 2022

IN THE MATTER OF:

Mr. Prabhakar Rai & Ors.

...Appellants

VERSUS

Union of India & Ors.

...Respondents

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RESPONDENT NO. 5
THROUGH


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Date: 25.02.2023

Place: New Delhi

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**ADDITIONAL SUBMISSIONS ON BEHALF OF THE
RESPONDENT NO. 5 IN COMPLIANCE TO THE ORDER
DATED 27.01.2023 PASSED BY THIS HON'BLE TRIBUNAL**

MOST RESPECTFULLY SHOWETH

1. That the present Additional Submissions is being filed to bring on record the measures and technology adopted by the Respondent No. 5 to minimize any kind of pollution/ discharge which may result from the operation of the CBWTF.
2. The Respondent No. 5 has already prepared comprehensive steps which shall be adopted by it once the CBWTF becomes operational considering the stringent measures prescribed by UPPCB to control effluent and liquid discharge.

The measures which the Respondent No. 5 seeks to adopt are enumerated as under:

- (i) **Potential of spread of infection from storage premises:**

As regarding the potential for spread of infection from wastes stored in the premises, the time limit for

treatment and disposal of bio-medical waste as stipulated under the Bio- Medical Waste Management Rules, 2016 is within 48 hours. However, we shall minimize this time period and ensure that the untreated bio-medical waste is not stored beyond a period of 24 hours. Furthermore, the storage rooms shall be well ventilated and shall be provided with 'fly catcher/killing device'. The storage rooms shall be washed and cleaned every day to regulate the odour generated from the bio-medical waste, spray of disinfectants like hydrogen peroxide or hypo shall be done as soon as the bio-medical waste is received at the site. During transportation, the containers shall be covered in order to prevent exposure of public to odours and contamination. All the bio-medical waste shall be stored in the non-chlorinated colour coded closed bags. The house keeping checklist shall be made and monitored every day at 08 a.m. by the person responsible for collection of bio-medical wastes. He shall carry a register with him to maintain the records such as name of the healthcare unit, the type and quantity of waste received, time at which the waste collected from the member HCF, signature of the authorized person from the healthcare unit etc.

(ii) **Applicability of the effective Pollution Control System:**

The most common source of generation of pollutants in a common bio-medical waste treatment facility is the

incinerator. In order to check the proliferation of poorly designed bio-medical waste incinerator, guidelines on "Design & Construction of Bio- medical Waste Incinerator" has been prepared and well documented in CPCB guidelines. However, extra precaution shall be taken to avoid any kind of leakage, pilferage, fugitive emission from the incinerator beyond 10 meters. It is most humbly submitted that entire process is in close loop from where the possibility of any leakage doesn't arise. Following measures have been proposed to be implemented for control of pollution inside the plant area:

- a. **Waste Feeding:** Waste Feeding by way of automatic system and closely monitoring the burning rate. Further it shall be ensured that the waste is feeded in shifts and that entire waste is not piled at once.
- b. **Use of Fuel:** The fuel to be used shall be the low sulphur content i.e., High Speed Diesel shall be used.
- c. **Incinerator Chest Area:** As per the CPCB guidelines chest area for the 50 kg/hr capacity incinerator shall be 0.75 sqm. In our case, the capacity is 250 kg/hr, therefore, the chest area shall be 3.75 sqm but we are proposing to keep the chest area 10% more so as to facilitate the easy burning of the waste.
- d. **Incinerator Chamber:** The incinerator chamber shall always be in suction i.e., in negative (-) 1.5 to

2 mm w/c so as to ensure that no emission occurs outside the incinerator.

- e. **Emergency Vent:** The emergency vent shall be provided in the incinerator on top so that in case of chamber in pressure it will operate automatically and release to downstream absorption system.
- f. **Inspection of Chamber:** Periodical inspection of the chamber shall be carried out every month and a separate record for the same shall be maintained at all times.
- g. **Scenario of adverse fugitive emission:** To reduce the risk of adverse fugitive dust emission inside the building effective water sprinkling system throughout the building shall be implemented to mitigate and control the emission from travelling outside the premises.
- h. **Combustion Efficiency of incinerator:** Incinerator shall always be operated maintaining 99.9% combustion efficiency. Moreover, there shall be regular display of combustion efficiency on panel and it shall be connected to CPCB/UPPCB online continuous monitoring server. The combustion efficiency (C.E.) is computed as follows:

$$\text{C.E.} = \frac{\text{CO}_2 + \text{CO}}{\text{CO}} * 100$$

The proposed cost of the incinerator along with the instrumentation and auto control shall be approx.

120 Lakhs.

(iii) **Potential of odour control:** The potential risk of generation of odour from the operation of the CBWTF shall be minimized and controlled by the regular use of long lasting perfumes. The perfume shall be sprayed inside the shed to supersede the foul odour. All the bio-medical waste shall be stored in closed non- chlorinated plastic bags and it shall be ensured that the maximum storage time shall in no case exceed 24 hours instead of 48 hours as stipulated by the CPCB guidelines.

(iv) **Potential of discharge of waste water:** There is two types of water to be generated from the operation of the Common Bio-Medical Waste Treatment Facility which includes:

a. Process Water

The process water shall remain in circulation through the venturi scrubber/quenching column/absorption column. This water shall not be allowed to be discharged outside and shall be completely reutilised in system by cooling through the cooling water plant.

b. Waste Water

The waste water shall be generated from washing vehicles and the same shall be collected in the Effluent Treatment Plant (ETP) and after processing and filtering it shall be used in the process as

makeup water. It is pertinent to mention here that no fresh water is used in the make up water. The project shall be operating entirely on the concept of Zero Liquid Discharge.

The material balance of water is computed as under:

- Cooling Tower Evaporation Loss = 200 Ltrs/ hr
- Floors and vehicles washing/ staff bathing water = 200 Ltrs/ hr
- ETP Load = 200 Ltrs/ hr
- Process water in circulation = 10 m³/hour
- Required makeup water = 200 Ltrs/ hour

(v) **Plant Cost:** The project cost of the common bio-medical waste treatment facility of the answering respondent is 380 Lakhs. The bifurcation of the project cost is as under:

- a. Cost of the Incinerator with automation and spray system = 120 Lakh
- b. Cost of the autoclave/ shredder/ ETP/ Air Pollution Control System/ Civil Work = 260 Lakh

(vi) **Additional Safety Measures:**

- a. On PLC Control Panel the permissible parameter shall be set to ensure that all are operational within the limit. In case of exceeding any parameter, alarm will sound and if the not correction within the

stipulated time limit then the burner will shut off automatically. The system can also be monitored on UPPCB/CPCB server when the unit is operational.

- b. Except incinerator body and chimney, all pollution control system like ducts/ venturi scrubber/ quenching column/ lime absorber/ activated carbon absorber shall be made of SS-316 to avoid any corrosion/leakage from body.
- c. As per the Condition VIII of the environment clearance accorded to the unit, the project is required to provide solar power generation on roof tops of buildings, for the solar light system for all common areas, street lights, parking around the project area and same shall be maintained regularly. As Abadi is located towards North of the unit, the answering respondent for making additional partition shall install the solar panel at the North Side boundary facing south to protect any emission to travel beyond boundary.
- d. In between Abadi and plant site, a *Bagh* is situated in 15 m width and 60 m length to safeguard direct entry of any emission from plant to abadi site. Abadi is located towards the North side of the unit and wind rising towards North is very exceptional.
- e. Bank Guarantee of Rs. 2.50 Lakh has already been submitted to UPPCB dated 29.03.2022 against the performance guarantee.

3. That the Respondent No. 5, besides the above steps to be undertaken in the operation of CBWTF, is willing to comply with any other condition imposed by this Hon'ble Tribunal for the operation of the CBWTF.

PRAYER

It is, therefore, most respectfully prayed that this Hon'ble Tribunal may graciously be pleased to:

- a. Take on record the Additional Submissions on behalf of the Respondent No. 5;
- b. Pass any further Order(s) as this Hon'ble Tribunal may deem fit and proper in the interest of justice.

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