



**क्षेत्रीय कार्यालय उत्तर प्रदेश प्रदूषण नियंत्रण बोर्ड**  
**REGIONAL OFFICE U. P. POLLUTION CONTROL BOARD**

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संदर्भ सं०... 60/2019 / O.A.No- 611 / 2019

दिनांक... 14/11/2019

To,

**The Registrar,**

The National Green Tribunal

Principal Bench,

New Delhi

E-Mail- judicial-ngt@gov.in & ngt.filling@gmail.com,

**Subject:-** Compliance of direction issued by Hon'ble National Green Tribunal in Original Application No. 611/2019 Rakesh Tiwari, President, Dusit Paryavaran Hatao Samiti Versus State of U.P. in order dated 13-08-2019.

**Sir,**

With reference to the above subject mentioned above, this is to inform you that in compliance of order issued on 13-08-2019 by Hon'ble National Green Tribunal in Original Application No. 611/2019 Rakesh Tiwari, President, Dusit Paryavaran Hatao Samiti Versus State of U.P. The compliance report is submitted for your kind perusal and necessary action please.

Your Sincerely

(J. B Singh)

**Regional Officer**

**Copy to:-**

1. District Magistrate, Prayagraj for information.
2. Member Secretary, U.P. Pollution Control Board Lucknow for information.
3. Sri Pradeep Misra, Advocate Hon'ble Supreme Court/NGT, New Delhi for perusal and necessary action please.
4. Chief Law Officer, U.P. Pollution Control Board Lucknow for information.
5. Chief Environmental Officer (Circle-2), U.P. Pollution Control Board Lucknow for information.

**Regional Officer**

14/11/2019  
 AEE

National Green Tribunal Principal Bench, New Delhi,

Original Application No. 611 of 2019

The matter of: Rakesh Tiwari, President, Dushit Paryavaran Hatao Samiti Vs State of  
Uttar Pradesh

Joint Committee Report in the matter of M/s Sangam Mediserve Pvt. Ltd., Allahabad  
(Prayagraj), Uttar Pradesh

Hon'ble NGT vide its order dated 13.08.2019 in the matter of O.A. No. 611 of 2019 (Rakesh Tiwari, President, Dushit Paryavaran Hatao Samiti Vs State of Uttar Pradesh) constituted the Joint Committee comprising representative of District Magistrate, Allahabad (Prayagraj), Central Pollution Control Board (CPCB) and Uttar Pradesh Pollution Control Board (UPPCB) for looking into the matter against illegal activities in disposal of infected biomedical waste, discharge of untreated hazardous effluents and causing air pollution by M/s Sangam Mediserve Pvt. Ltd., Allahabad (Prayagraj), Uttar Pradesh.

In compliance to the above-mentioned directives of Hon'ble NGT, the following members are nominated for the Joint Committee by the concerned organisations/institute.

- Shri Subhash Chandra Yadav, SDM, Handia, Prayagraj
- Shri Rajendra D Patil, Scientist D, Regional Directorate, CPCB, Lucknow
- Shri Kaushal Kumar, AEE, Regional Office, UPPCB, Prayagraj

The joint committee conducted visit of M/s Sangam Mediserve Pvt. Ltd., Allahabad (Prayagraj), Uttar Pradesh on 11.09.2019.

The major observations and findings of the visit are as given below:

01. Earlier in 2018, similar kind of complaint was received against the CBWTF regarding illegal disposal of Bio-medical waste by the facility operator especially contaminated plastic bottles, Syringes, I.V. set etc. In response, joint team of officials from CPCB & UPPCB was visited the CBWTF on 16.10.2018. The major finding of the joint inspection was,

- During the visit, no such prominent illegal disposal practices were observed by inspecting team. However, considering the observations noted in the report, possibility of illegal disposal of Bio-medical waste by CBWTF operator cannot be ruled out.

  
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- The concentrations of particulate matters in source emissions were 4,525 mg/Nm<sup>3</sup>.
  - Based on non-compliance found w.r.t. discharge Norms and other various provisions of BMWM Rules 2016, Directions under Section 5 of Environment (Protection) Act, 1986 was issued by Central Pollution Control Board to the facility on 12.12.2018 which was further amended on 15.04.2019.
02. The Consents under Air & Water Acts is valid upto 31.12.2019. The Authorization under BMWM Rule was issued by UPPCB on 24.07.2018 having validity of 5 years from the date of issue. The Authorization issued under the provisions of Hazardous and other Wastes (M & TM) Rules 2016 is valid upto 19.01.2023.
  03. As per the Authorization under BMWM Rule, the installed treatment capacity of the CBWTF is 5,000 Kg/day. The CBWTF has installed incinerator (250 Kg/hr), Autoclave (500 Kg/hr) and Shredder (300 Kg/hr) for treatment of bio-medical waste.
  04. As per the information provided by the facility operator, total 456 healthcare facilities having total 7,881 beds and located in 08 districts are the members of the CBWTF. The CBWTF claims the treatment & disposal of 1,100 Kg bio-medical waste per day against the installed capacity of 5,000 Kg/day.
  05. As per the information provided by CBWTF operator, Rs. 2,500/- per month is charged from the HCFs having beds less than 10 and Rs. 3,500/- per month is charged from HCFs having beds 11 - 20. Whereas Rs. 7/- per bed per day is charged from HCFs having beds more than 21.
  06. As per the copy of RC papers provided by the CBWTF operator total 11 Light Goods Vehicle & 02 Three Wheelers are engaged for the bio-medical waste collection. It was informed that GPS tracking system is provided in all the transport vehicles. The screenshot of mobile app used for tracking of these transport vehicle provided by CBWTF operator.
  07. The CBWTF has provided the vehicle washing facility. However, the vehicle parking is yet to be properly developed/constructed.
  08. All the treatment equipments are installed in one common shed, wherein shredder and autoclave area is separated by intermediate walls. However, adequate isolated areas for Bio-Medical Waste receiving, temporary waste & treated waste storage near each equipment was not provided as per CPCB guidelines.
  09. The CBWTF operator is maintaining the record regarding waste collection and waste treated through incinerator, autoclave and shredder. The details of waste collection



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and operations of incinerator, autoclave, DG set & ETP during April 2019 to July 2019 is tabulated and attached at Annexure.

10. As per the records, around 184,285.44 kg biomedical waste was incinerated during April 2019 to August 2019. Incinerator was operated for 1,075.41 hrs during the period. Thus, incinerator is operated at 171.36 kg/hr capacity against the installed capacity of 250 kg/hr.

11. Similarly, around 1,398.8 kg biomedical waste was treated through autoclave in 88 batches. Which means only 15.89 kg waste is treated in each batch. This seems to be unrealistic considering the reported capacity of autoclave as 500 kg/batch.

12. It was informed by the CBWTF operator that the incinerator is complying with the 02 Seconds residence time of flue gas at 1,050°C in Secondary Chamber. The CBWTF operator has also provided certificate of supplier regarding compliance of 02 Seconds Residence Time.

- As per the certificate provided the Volume of Secondary Combustion Chamber is 18 m<sup>3</sup>.
- The Estimated Thermal Capacity of the Incinerator is reported as 0.9 Million Kcal/hr.

13. The Thermal Capacity is calculated based on data of the month August 2019 provided by CBWTF Operator. The calculations are as given below:

- Total quantity of waste Incinerated during August 2019 is 44635.24 Kg. Calorific Value of Waste is considered as 1,500 Kcal/Kg.
- Total diesel consumption in Incinerator during the period is 1564 liters. Considering Specific Gravity of diesel is around 0.85, the weight of diesel used in combustion is 1329.4 Kg. The Average Calorific Value of diesel is considered as 10,500 Kcal/Kg.
- Thus, total Calorific Value generated due to combustion of waste and diesel in incinerator is 80,911,560 Kcal. And Total operational time of Incinerator reported during the period is 242 hrs.
- Considering above, the Estimated Thermal Capacity is around 0.334 Million Kcal/hr.
- Thus, the Estimated Thermal Capacity is less than 50% of recommended Thermal Capacity (0.7 Million Kcal/hr) for the Incinerator having 250 Kg/hr capacity in accordance with the guideline of CPCB for verification of 02 Seconds residence time in Secondary Combustion chamber of the bio-medical waste incinerator.

  
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14. The thermal capacity of the incinerator claimed (0.9 Million Kcal/hr) in the certificate provided by supplier is three times higher than the calculated thermal capacity (0.306 Million Kcal/hr) based on the actual data provided by the CBWTF operators. And hence, it seems that the fabricated information is submitted by the CBWTF operator and supplier, which requires further investigation.
15. The CBWTF implementation of bar-coding system for tracking of bio-medical waste only with four transport vehicles. Thus, the bar-coding system is only partially implemented.
16. The CBWTF is collecting expired medicines mainly from Lucknow, Varanasi, Ghaziabad and Delhi. Around 27,722 Kg expired medicines were collected by CBWTF during April 2019 - August 2019. Thus, CBWTF is illegally collecting the expired medicines beyond its coverage.
17. The CBWTF has provided separate shed for storage of expired medicines near vehicle washing area. Lots of expired medicines were seen stored in the shed. Some of the expired medicines were also kept near incinerator area. It was informed that these expired medicines are kept for incineration.
18. It was informed that the expired medicines are disposed of through incinerator.
- As per the data provided around 1,75,566.3 Kg incinerable bio-medical waste was collected by CBWTF during April 2019 – August 2019.
  - In addition to that around 27,722 Kg bio-medical wastes were collected by CBWTF during April 2019 – July 2019.
  - Whereas only 1,84,285.44 Kg waste was disposed of through incinerator during April 2019 – August 2019.
  - This clearly indicates that the only incinerable waste collected is treated through incinerator. And hence, disposal of expired medicines in unauthorized manner cannot be ruled out.
19. As per the BMW Rules 2016, the expired medicines are to be incinerated at 1,200 °C. And as per incinerator log book the highest temperature maintained in the incinerator is around 1,050 °C. Thus, CBWTF operator is not incinerating the expired medicines as per rule.
20. During visit, it was observed that Primary Chamber and Secondary Chamber are maintained temperature of 830°C & 1,114°C respectively.
21. Device for measurement of negative draft in primary chamber and pressure drop in the venturi was not provided with incinerator.

  
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22. The CBWTF operator has started to perform routine chemical indicator strip test in each batch of autoclave and also maintained the records of the same. The spore test is also performed after every three months through 3<sup>rd</sup> party laboratory. The records of strip test & spore test are maintained by the operator.

23. During the inspection, several issues are observed during operations of autoclave.

- The leakage in pipe allowing pressure drop as a result desired pressure level was not maintained constantly.
- The batch cycle was started automatically even before achieving desired degree of pressure in the autoclave.
- This indicates that the autoclave installed for treatment of bio-medical wastes was not operating properly.

24. The CBWTF operator has made agreement with scrap vendor M/s Sagar Traders, Kanpur for disposal of treated Shredder cutting, IV set, Gloves, Glass, Water bottle & syringe.

25. The facility operator has also made agreement with TSDF being operated by M/s Bharat Oil & Waste Management Ltd on 25.08.2017 for disposal of Hazardous waste generated by CBWTF. The validity of agreement is 05 years from date of signing.

26. As per the details, around 6,790 Kg incinerator Ash and ETP sludge was sent to TSDF during 22.08.2018 to 19.02.2019 (i.e. during FY 2018-19) and 3,017 Kg incinerator Ash and ETP sludge was sent to TSDF on 17.04.2019 & 28.06.2019 (i.e. during FY 2019-20).

- UPPCB has issued HW Authorisation for generation & disposal of 5 MT incinerator ash per Year through TSDF.
- The CBWTF also sending ETP sludge to TSDF for which Authorisation was not obtained by CBWTF.
- The quantity of waste sent to TSDF for disposal is also higher than the quantity Authorised by UPPCB.

27. The facility has installed one tube well to meets its fresh water requirement for industrial and domestic purpose. The facility operator has not installed electromagnetic flow meter to measures fresh water withdrawal.

28. As per the consent issued under Water Act, 1974 by UPPCB, the CBWTF was also instructed to obtain NOC from CGWA. Though the facility operator applied to obtain NOC from CGWA the permission yet to be granted.

29. The CBWTF facility has installed Effluent Treatment Plant of comprising of collection tank, Flash Mixer (Lime Alum Poly), Primary settling tank, Secondary Settling Tank,

  
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treated wastewater storage tank and Activated Carbon Filter. Sludge drying beds are also provided for sludge dewatering. As reported by the facility operator, the ETP treated water is reused in venturi scrubber.

30. The electromagnetic flow meters are not installed at ETP inlet, outlet recycle line. And hence proper records regarding wastewater generation, treatment & reused is not available with the operator.

31. During the visit, samples are collected from ETP to verify the compliance. The analysis results are as tabulated below:

Parameter	Unit	ETP Inlet (RDP-321)	ETP Outlet (RDP-322)	Prescribed Standards
pH	-	2.09	7.07	6.5-9.0
SS	mg/L	21.6	4.08	100
TDS	mg/L	2495	477	---
BOD	mg/L	892	19.4	30
COD	mg/L	573	5.02	250

All values are in mg/l except pH

32. The ETP is meeting the prescribed Norms. As informed by CBWTF operator the treated wastewater is reused in venturi scrubber.

33. The flue gas emitted from incinerator is passed through quenching and venturi scrubber removal of particulate matters & gases pollutants before discharge in to environment through 32 m height stack.

34. During inspection, the source emission monitoring of incinerator stack was carried out to verify the compliance of BMW Norms.

Sampling location	PM (mg/Nm <sup>3</sup> ) (at 11 % O <sub>2</sub> correction)
Stack emission	1,857
Standard prescribed under BMW Rule	50

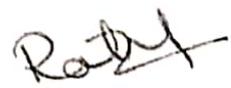
35. The Concentrations of particulate matters in source emissions are found 37.48 times higher than the prescribed emission Norms.

36. The facility operator has installed on line flue gas analyzer at incinerator stack for measuring of the O<sub>2</sub>, CO, CO<sub>2</sub> display also Primary and secondary Temperature of incinerator. On line system is connected to UPPCB / CPCB sever.

37. Only one porthole is provided in the stack attached with incinerator. The OCMS probe is fixed in the same porthole and hence the OCEMS probe is removed and outside on the monitoring platform during the physical monitoring. And hence cross verification of OCEMS is not possible.

  
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38. Sample of ground water was also collected during the visit and analysed at CPCB RD Lucknow laboratory.

Parameters	Unit	Value (RDP-323)	Acceptable Limit as Per (IS 10500:2012)
pH	---	7.30	6.5 -8.5
Turbidity	NTU	1.5	01
Color	Hazen	05	05
Conductivity	µmho/cm	704	---
Suspended Solids	mg/l	BDL	---
TDS	mg/l	423	500
Total Hardness	mg/l	318	200
Calcium	mg/l	54.4	75
Magnesium	mg/l	44.2	30
Chloride	mg/l	12.2	250
Sulphate (SO <sub>4</sub> -2)	mg/l	15.9	200
Phosphate	mg/l	BDL	---
Nitrate (NO <sub>3</sub> -)	mg/l	13.9	45
Alkalinity	mg/l	330	200
COD	mg/l	BDL	---
Cadmium (Cd)	mg/l	BDL	0.003
Chromium (Cr)	mg/l	BDL	0.05
Copper (Cu)	mg/l	0.020	0.05
Iron (Fe)	mg/l	BDL	0.3
Manganese (Mn)	mg/l	0.062	0.1
Nickle (Ni)	mg/l	0.248	0.02
Lead (Pb)	mg/l	0.059	0.01
Zinc (Zn)	mg/l	BDL	5
Arsenic (As)	mg/l	BDL	0.01
Mercury (Hg)	mg/l	BDL	0.001

The Turbidity, Alkalinity, Total hardness, Magnesium, Nickle & Lead in Groundwater are found in higher level than the Acceptable Limit for drinking water as Per IS 10500:2012.

39. Though the CBWTF has developed own website with URL <http://sangammediserve.com> the essential relevant information as per the CPCB guideline regarding waste management records, monthly records, annual reports etc. was not displayed on the website.

40. The details action plan on mitigation measures to taken during closure of CBWTF was not provided by the facility operator.

41. Environmental Compensation

  
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- The Hon'ble National Green Tribunal (NGT), Principal Bench in the matter of O.A. No. 710 of 2017 filed by Shailesh Singh vide its order dated 12.03.2019 directed CPCB to undertake study and prepare a scale of compensation to be recovered from violators of Biomedical Waste Management Rules, 2016 (BMWM Rules, 2016). Hon'ble NGT also directed that State Pollution Control Boards (SPCBs) can also recover compensation from the polluters by laying down their own scale which should not less than the scale fixed by CPCB.
- In response, CPCB has developed 'Guidelines for Imposition of Environmental Compensation Charges against Healthcare Facilities and Common Biomedical Waste Treatment Facilities' and submitted to Hon'ble NGT.
- The said document is referred to calculate the amount of Environmental Compensation to be imposed against the facility.
- Environmental Compensation for CBWTFs =  $PI \times S \times R \times N$

Where;

- PI- Pollution Index which is a number from 0 to 100 and increasing value of PI denotes the increasing degree of pollution hazard from CBWTF.

Point of non-compliance	Concerned PI
Incinerator emissions not complying with standards notified under BMWM Rules, 2016	15
Not complying with standards of autoclave notified under BMWM Rules, 2016 Treatment cycle started before achieving desired pressure	15
Other violations of BMWM Rules, 2016 and Guidelines	
Not achieving 2 Seconds residence time	10
Only partially implementation of bar-coding system	10
Collection and treatment of expired medicines are not as per BMWM Rules	10
Non availability of action plan on mitigation measures to taken during closure of CBWTF	10
Total PI Score	70

- S – Scale of Operation  
'S' is 0.50 as the incinerator capacity is 250 Kg/hour.
- R – Environmental Compensation factor, which is taken as 250 Rupees.
- N – Number of days of Violation  
Earlier violation was detected on 16.10.2018 based on which CPCB has issued the Directions to the industry.

  
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There are total 330 days between 16.10.2018 – 11.09.2019. However, the CBWTF is not operating on Sundays and hence total Number of days of Violations are 283.

• Therefore,

$$\begin{aligned}\text{Environmental Compensation (EC)} &= \text{PI} \times \text{S} \times \text{R} \times \text{N} \\ &= 70 \times 0.50 \times 250 \times 283 \\ &= 8,750 \times 283 \\ &= \text{Rs. } 24,76,250 \text{ /-}\end{aligned}$$

- However, the CBWTF has already paid Rs. 3,69,135/- as compensation vide UTRE No. ALLAH19114661480 on 24.04.2019.
- And hence, the balanced amount of Rs. 21,07,115/- can be recovered from CBWTF as an Environmental Compensation.
- In addition, to above Rs. 8,750/- per violating day may be charged till the CBWTF rectified the violations detected.

#### RECOMMENDATIONS:

The CBWTF is found violating the various provisions of BMWM Rules, 2016. And hence, the CBWTF may be asked to submit Environmental Compensation (EC) of Rs. 21,07,115/- immediately.

In addition, the CBWTF can be asked to pay Rs. 8,750/- per violating day till the complying with the following

1. The CBWTF should comply with emissions standards Notified under BMWM Rules, 2016.
2. The CBWTF should upgrade its incinerator to achieve 2 seconds residence time in secondary chamber.
3. The CBWTF should ensure fully implementation of bar-coding system.
4. The CBWTF should collect and treat the expired medicines as per provisions of BMWM Rules, 2016.
5. The CBWTF should prepare and submit the action plan on mitigation measures to taken during closure of CBWTF.

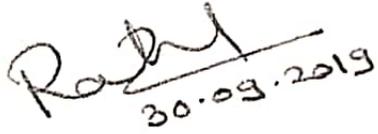
  
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6. In addition to above the CBWTF should also rectify the following issues

- The CBWTF should obtain NOC from CGWA for ground water extraction.
- The CBWTF should strictly follow the conditions of HW Authorisation w.r.t waste categories & quantities sent to TSDF.

Joint Inspection Committee	
Shri Subhash Chandra Yadav, SDM, Handia, Prayagraj	
Rajendra D Patil, Scientist C Regional Directorate, CPCB, Lucknow	 30.09.2019
Shri Kaushal Kumar, AEE, Regional Office, UPPCB, Prayagraj	
Date of inspection	September 11, 2019