

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

(By Video Conferencing)

Original Application No. 72/2020

(With report dated 17.06.2020)

In re: Scientific Disposal of Bio-Medical Waste arising out of Covid-19
treatment- Compliance of BMW Rules 2016

Date of hearing: 20.07.2020

**CORAM: HON'BLE MR. JUSTICE ADARSH KUMAR GOEL, CHAIRPERSON
HON'BLE MR. JUSTICE S. P. WANGDI, JUDICIAL MEMBER
HON'BLE DR. NAGIN NANDA, EXPERT MEMBER**

Respondent(s): Mr. Rajkumar, Advocate for CPCB

ORDER

1. The issue for consideration is the remedial action to address the gaps in compliance of the BMW Rules, 2016, as applicable to the disposal of bio-medical waste **arising out of handling of COVID-19** disease.

2. Scientific management of such waste is necessary for protection of environment and public health in view of potential of such infectious waste affecting public health generally and the concerned workers and professionals etc. in particular. The matter was earlier considered vide order dated 23.04.2020 in the light of news item dated 19.04.2020, published in the Indian Express titled '**Biomedical waste facilities, a**

red flag in coronavirus fight'. The Tribunal also considered the 'Guidelines for Handling, Treatment and Disposal of Waste Generated during Treatment/ Diagnosis/ Quarantine of COVID-19 Patients'. It was observed:-

*“We had interaction broadly on the **need for revision of the laid down guidelines to address all concerns in the light of best practices and experience from time to time** so that all aspects of scientific disposal of liquid and solid waste management are taken care of not only at institution level but also at individual levels (such as manner of disposal of used PPEs, used bags, gloves, goggles, etc., without the same getting straightaway mixed with other municipal solid waste causing contamination etc.), dealing with situations where adequate facilities (like incinerators) are not available, distinct colour guidelines for the bins etc., reviewing effectiveness of the monitoring mechanism, including securing information by way of electronic manifest system from the handlers of such waste and its online reporting by the State PCBs/PCCs on daily basis by developing necessary software, creating awareness by special awareness programmers, organizing trainings in concerned Local Bodies, Health Departments, etc., providing workers handling COVID-19 waste with adequate protective gear, adequate coordination with media and other concerned regulatory authorities in the States and the Central Government. We have also observed that out of 2.7 lakh HCFs identified, only 1.1 lakh HCFs are authorized under the BMW Management Rules, 2016 so far. The State PCBs/PCCs have to make serious efforts to bridge this gap to mitigate possible risk in terms of unscientific disposal of bio-medical waste and to enforce rule of law.”*

3. The Tribunal referred to pending proceedings in O.A. No. No. 710/2017, *Shailesh Singh v. Sheela Hospital & Trauma Center, Shahjahanpur & Ors.* to remedy gaps in compliance of Bio- Medical Waste Management Rules, 2016 generally. In the said matter, vide order dated 22.01.2020, the Tribunal observed:-

*“2.**unscientific disposal of bio-medical waste had potential of serious diseases such as Gastrointestinal infection, Respiratory infection, Eye infection, Genital infection, Skin infection, Anthrax, Meningitis, AIDS, Haemorrhagic fevers, Septicaemia, Viral Hepatitis type A, Viral Hepatitis type B and C, etc. Such unscientific disposal also causes environmental pollution leading to unpleasant smell, growth and multiplication of vectors like insects, rodents and worms and may lead to the transmission of diseases like typhoid, cholera, hepatitis***

and AIDS through injuries from syringes and needles contaminated with various communicable diseases

3. Reference was also made to the report of the CAG placed on its website in May, 2017 as follows:

*“Inadequate facility of bio-medical waste (BMW) treatment. As per the report paragraph 2.1.9.5 there were 8,366 Health Care Establishments (HCEs) out of which 3,362 HCEs were operating without authorization. **Total BMW generated in the State was 37,498 kg/day out of which only 35,816 kg/day was treated and disposed of. BMW of 1,682 kg/day was being disposed of untreated due to inadequate treatment facility. But UPPCB failed to monitor unauthorised operation and untreated disposal of BMW and did not take any action against the defaulters.**”*

4. The matter was again reviewed on 15.07.2019 in the light of the report of the CPCB particularly with reference to inventory of HCFs and biomedical waste generation, operation of healthcare facilities without authorization, **action by the States with no treatment & disposal facilities, implementation of Barcode system, constitution of State Level Advisory Committees, submission of Action Plans by State Governments, key performance indicators, Environmental Compensation for violation by the healthcare facilities and Environmental Compensation for common biomedical waste treatment facility.**
5. The recommendations in the report were accepted. All the States/UTs were directed to take further action on that basis. The Tribunal also directed:-

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8. The States/UTs may furnish complete inventory of HCFs and BMW generation within two months and where the inventories are incomplete, the same may be completed. We place on record our disapproval of the inaction of States in furnishing the inventory studies as well as for incomplete inventories. **It is regretful to note that 25% of identified HCFs have not even taken authorization from the concerned State PCBs in absence of which, monitoring of waste management is not taking place. The States which have not set up common treatment and disposal facility must do so within two months as per Rules.** The States who have not furnished the information on the barcode system may also furnish such information at the earliest but not beyond two months. The States which have not yet constituted State Level Advisory Committee may also do so within two months. The action plans and their execution must be carried out having regard to the key performance indicators. **The States which have inadequate action plans, not satisfactory action plans, needing further**

actions must also do the needful within two months realizing their responsibility to the environment and public health which ought to be monitored directly by the Chief Secretaries in terms of order of this Tribunal dated 16.01.2019 in O.A. No. 606/2018 and further orders in the said matter.

4. The Tribunal further observed:

“7. COVID 19 pandemic has emerged in the last few months and has affected number of people across the world. More than one and a half lac people have died world over and more than 600 in India. The virus spreads mainly by droplets and also by touch of contaminated articles. To prevent spread, lock down has been enforced, restricting people to their homes, so as to avoid social contact. Affected persons are treated in hospitals and those suspected are quarantined in various facilities or at home. Large scale testing has been and is being done. By way of precaution, masks, gloves, PPE etc. are used which are disposed of thereafter. In the process, huge bio-medical waste is generated which itself can be source of disease. While the BMW Rules generally take care of the situation by way elaborate provisions to deal with biomedical waste generated in dealing with infectious diseases such as HIV, HINI etc., present pandemic has presented further challenge inter-alia on account of:

- (i) Existing gaps in compliance of BMW Rules in terms of capacity to scientifically dispose of generated waste and non-compliance of procedural and monitoring aspects;*
- (ii) COVID-19 virus has emerged suddenly and is highly infectious, requiring more precautions compared to other infectious diseases.*

9. There appears to be need for further revision of the guidelines to cover all aspects covering not merely institutions but also individual households and dealing with situations where scientific disposal facilities like incinerators are not available and any unmindful deep burial without adequate safeguards can adversely affect the ground water and pose danger to health and safety of people.

Disposal of COVID-19 waste in general bins so as to be part of municipal waste or unscientific handling sewage and other liquid waste without safeguards can also be hazardous. There is also need to incorporate best practices in the light of further experience and new thoughts emerging from time to time, apart from continued supervision and monitoring, compiling data in an online format, use of electronic /digital manifest system to track and log COVID-19 waste from all sources, preventing its accidental spillage, analyzing the data for strategic planning and the feedback by creating necessary software, to the extent viable.

There is also need for creating awareness about the precautions and steps to be taken by all handlers and workers as well as citizens, making a model plan, to be

adopted locally by the Panchayat, Sub-division, District and State authorities with such further changes as may be necessary in local conditions. Health of all operators has been protected and preventive measures taken. There is need for orientation/training of persons responsible for compliance in Local Bodies and Health department by an online mechanism besides providing them with adequate protective gear. CPCB has to take lead and coordinate with media as well as the concerned Central/State departments.

Let the Chief Secretary of States/UTs by coordinating the activities of State's concerned departments like of Urban Development, Health, Irrigation & Public Health also closely monitor the scientific storage, transport, handling, management and disposal of COVID-19 waste as its unscientific handling poses a grave threat environment and health of people. At the national level, let a high level task team of Ministry of MoEF&CC, Health UD, Jal Shakti, Defence and CPCB supervise the handling and scientific disposal of COVID-19 waste in accordance with the guidelines.

Let the State Departments of Environment and PCBs/PCCs ensure compliance of Biomedical Waste Management Rules, 2016 and furnish action take report to CPCB and CPCB take further steps and furnish a consolidated report to this Tribunal of the steps taken and the ground status as on 31.5.2020. The report may be furnished by 15.06.2020.

List for further consideration on 22.06.2020.”

5. Pursuant to above, CPCB has filed its consolidated report on 17.06.2020 mentioning the steps taken and ground status of compliance.

6. The report mentions the meeting held by the Member Secretary, CPCB with the State PCBs/ PCCs, preparation of awareness material such as web circular, posters, videos, pictorial guidelines, user manual, waste tracking app, Covid – 19 related audios-videos and jingles. High Level Task Team was constituted with representatives from Ministries of Environment Forest & Climate Change, Health and Family Welfare, Jal Shakti, Housing and Urban Affairs and Defence. Model plans were prepared by the High Level Task Team for management of Covid – 19. CPCB revised its guidelines on 10.06.2020 covering following aspects:-

a. Description of general solid waste including indicative list of items for segregation in isolation wards, quarantine centres and homecare;

b. Scope of Training and awareness to waste handlers in hospitals and quarantine centres;

c. Use of COVID-19 biomedical waste tracking App "COVID19BWM" developed by CPCB by waste generators, transporters, CBWTF operators and SPCBs.

d. Guidance on handling of general solid waste from quarantine centres and isolation wards and disposal of solid waste.

e. Options for safe disposal of COVID-19 related biomedical waste, in case capacity of existing capacity of common biomedical waste treatment and disposal facilities (CBWTFs) is exhausted."

7. The guidelines have been circulated to concerned Central and State Government Departments. Waste tracking system software has been developed for waste generators, Common Biomedical Waste Treatment and Disposal Facility (CBWTF) Operators, State Pollution Control Boards / Pollution Control Committees and Urban Local Bodies. The system will track the generation, collection and disposal of waste. Some States have developed their own apps. 13 State PCBs/PCCs have initiated submission of daily status. Rest of the States are giving reports manually. A consolidated table based on information received with comments about adequacy of facility has been filed. The data has been analysed as follows:

"As per the information given by SPCBs/PCCs, 2,907 hospitals, 20,707 quarantine centres, 1,539 sample collection centres and 264 testing laboratories, are involved in generation of COVID-19 waste. Generation of COVID-19 related biomedical waste in the country is about 101 Metric Tonnes per day (MT/day). State-wise generation of COVID-19 biomedical waste generation and its management"

8. It is further stated:-

"(iii) As per the information received from SPCBs/PCCs, about 101 MT per day of COVID-19 related biomedical waste generated in the country, this quantity is in addition to normal biomedical

waste generation of about 609 MT per day. Further, about 195 CBWTFs are providing the services of collection, transportation and disposal of COVID-19 biomedical waste from hospitals, isolation wards, quarantine centres, home quarantines, homecare, sample collection centres and testing laboratories.

(iv) Available capacity for incineration of COVID-19 biomedical waste in the country is about 840 Metric Tons (MT) against the total generation of about 710 MT per day (comprising of 609 MT/day of regular biomedical waste and 101 MT/day of COVID related biomedical waste). It is estimated that about 55% of cumulative incinerator capacity in the country is being utilised. However, there may be capacity limitation in specific areas or cities when the available capacity of CBWTFs in a coverage area of 150 Km may not be adequate due to spike in generation of biomedical waste.

(v) Sudden spike in generation of biomedical waste may create critical situation in States with 70% or more capacity utilization of incinerators, therefore such States may identify stand-by facilities such as common hazardous waste incinerators, industrial captive incinerators and captive disposal facilities at HCFs. Use of deep-burial pits may be considered as a last option. Proper segregation of waste will also increase disposal capacity of incinerators.

(vi) Status of compliance by State/UTs and SPCBSs/PCCs with respect to awareness & training to waste handlers, preparation of model plans for villages and usage of COVID-19 biomedical waste tracking app.”

9. The table mentions that certain States have yet to implement guidelines regarding training and awareness programme and have to give information about execution of model plans for villages and subdivisions. The summary of the compliance status is mentioned as follows:-

“(vii) Improper segregation of waste has been reported from COVID-19 isolation wards, quarantine centres and quarantine homes. As per the provisions under Biomedical Waste Management Rules, 2016, Solid Waste Management Rules, 2016 and CPCB’s COVID-19 guidelines, segregation of wastes is essential for effective management of wastes.

(viii) Mixing of general solid waste with biomedical waste would result in additional load on CBWTF incinerators, which are not designed for domestic solid waste.

(ix) It is also observed that non-segregation of waste also result in incineration of contaminated plastics, which otherwise should have been collected in red bag for sterilization and recycling.

(x) SPCBs/PCCs are required to follow-up with ULBs to ensure regular collection of solid waste and biomedical waste from isolation wards, home quarantine centres and homecare units. SPCBs/PCCs may also issue appropriate instructions to concerned departments in State to ensure compliance to CPCB guidelines.”

10. In view of the above, while several significant steps have been taken by CPCB and others, the gaps in compliance as mentioned need to be urgently bridged. Segregation of Covid-19 from general waste is a must, not only to avoid additional load on CBWTF incinerators but also in the interest of avoid further contamination adversely affecting public health. There has to be constant and regular monitoring by the Chief Secretaries, State PCBs/PCCs and Health Departments in the States/UTs and by the High Level Task Team at Central level with further coordination by CPCB. We may also observe that where waste is not going to CBWTF incinerators, deep burial systems may be properly maintained as per protocols taking all due precautions to prevent harm to the environment.

11. CPCB may take further initiatives which should include conducting of appropriate programme on Doordarshan, All India Radio and other media.

12. Let a further consolidated report be compiled by CPCB based on information collected from all the State PCBs/PCCs as 30.10.2020 and filed by 31.12.2020 by e-mail at judicial-ngt@gov.in preferably in the form of searchable PDF/ OCR Support PDF and not in the form of Image PDF.

Copies of this order be sent to Chief Secretaries and Health Secretaries of all the States/UTs, State PCBs/PCCs, CPCB, Ministries of Environment Forest & Climate Change, Health and Family Welfare, Jal Shakti, Housing and Urban Affairs and Defence, Govt. of India, by e-mail.

List for further consideration on 12.01.2021.

Adarsh Kumar Goel, CP

S. P. Wangdi, JM

Dr. Nagin Nanda, EM

July 20, 2020
Original Application No. 72/2020
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