

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

Original Application No. 519/2019
WITH
Original Application No. 386/2019

News item published in "The Times of India" Authored by
Jasjeev Gandhiok & Paras Singh
Titled
"Below mountains of trash lie poison lakes"

WITH

Centre for Wildlife and Environment Litigation Applicant(s)

Versus

Union of India & Ors.

Respondent(s)

Date of hearing: 17.07.2019

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

For Applicant(s): NONE

For Respondent (s):
Delhi Mr. Vijay Kumar Dev, Chief Secretary,
Ms. Geeta Luthra, Senior Advocate with
Mr. Balendu Shekhar, Mr. Rajkumar
Maurya, Advocates for EDMC with Dr.
Dilraj Kaur, Commissioner, EDMC
Mr. Rajkumar, Advocate for CPCB
Mr. Sanjay Poddar, Senior Advocate for
SDMC
Ms. Puja Kalra, Advocate for North MCD
with Ms. Varsha Joshi, Commissioner,
North MCD
Ms. Sakshi Popli, Advocate for NDMC
Mr. Vinod Babu, Incharge, M.S., CPCB
Mr. Asad Warsi, representative of Indore
Municipal Corporation

ORDER

1. The issue for consideration is the disposal of 'legacy' waste dumped at *Bhalswa*, *Ghazipur* and *Okhla* dumpsites in Delhi where huge garbage has accumulated over the period of time adversely impacting public health and environment, which requires expeditious scientific and environmentally safe disposal as per applicable rules.
2. O.A. No. 519/2019 was taken up in view of a newspaper item published in "The Times of India" authored by Mr. Jasjeev Gandhiok & Paras Singh and titled "Below Mountains of Trash lies Poison Lakes" reporting that the said dumpsites were resulting in huge water contamination. The same were not being scientifically managed. The leachate was getting discharged into soil and also slipping to the River Yamuna, affecting its water quality. Accumulation of huge waste at the said sites posed a serious danger to the environment, life and public health in the area. The Solid Waste Management Rules, 2016 (SWM Rules) lay down statutory mandate for the manner of disposal of such old dumpsites but the same was not being done.
3. Vide order dated 30.05.2019, this Tribunal directed North, East and South Delhi Municipal Corporations to furnish their respective action taken reports. The Commissioners of the said

Municipal Corporations were required to remain present in person.

4. Accordingly, the Commissioners of the said Corporations are present in person. Mr. Vijay Kumar Dev, Chief Secretary, Delhi, Mr. Vinod Babu, Officiating Member Secretary of Central Pollution Control Board (CPCB) are also present. We have heard them and the learned counsel present at length.

5. The action taken report of the North Delhi Municipal Corporation (North MCD) is that detailed project report (DPR) has been prepared on 08.03.2019 which has three options. One of the options is "leaving the site as it is", which is completely out of question. Second option, bio-mining for 8.8 million cubic meter waste which is said to require a period of 15 years and cost of Rs. 1178 crores. The third option is of capping. Clause-J of Schedule-I of the SWM Rules provides for reduction of waste by bio-mining and waste processing followed by placement of residues in new landfills or capping with appropriate measures. According to the Commissioner of North MCD, closure and capping of the dumpsites, without bio-mining/bio-remediation is a better option to save money and to protect environment. The report relies upon a review of the DPR by a professor from the IIT, Delhi with regard to *Bhalswa* landfill.

6. According to the report dated 09.07.2017 of East Delhi Municipal Corporation (EDMC), it is stated that there was a

proposal to utilize the inert material as filling material in the widening of national highways. Some of the dumpsite gas has been extracted and flared in association with GAIL. A pilot project was conducted for bioremediation of 100 TPD for both fresh and legacy waste. Experts were consulted in regard to slope stabilization and treatment of leachate. EDMC has started decentralized waste management processes with the help of urban development fund from the Govt. of India to the tune of Rs. 70 Crores.

7. The Counsel appearing for South Delhi Municipal Corporation (SDMC) has handed over, during the hearing, their copy of action taken report. According to the action taken report furnished by the SDMC, it consulted experts and executed some work of sterilizing the legacy waste at *Okhla* Phase-I.

8. In O.A. No. 386/2019, the grievance raised was that unscientific capping process of the *Bhalswa* legacy waste dumpsites was against the SWM Rules and not conducive to the environment. This Tribunal, vide order dated 04.04.2019, sought opinion from a Committee comprising CPCB and Dr. G.K. Pandey, former Expert Member of this Tribunal, who is known to have expertise in the subject. Report dated 31.05.2019 has been submitted by the said Committee after visit to the *Bhalswa* site, visit to Bawana Waste Processing Plant and meeting with the North Delhi MC officers. Presentation was made before the said Committee by concerned

officers of the North MCD as well as experts hired by the said Corporation. Some of the observations of the said Committee are as follows:

“3.5 The Cost indicated in the DPR for bioremediation is Rs.1178 Crores. However, as per CPCB Guidelines for Disposal of Legacy Waste, the cost of bioremediation and bio-mining of dumpsite is in the range of Rs.400- 700/Cum which works out in the range of Rs.440 - 560 Crore. The actual cost shall be further reduced, if cost of land recovered by means of bio-mining/bioremediation is factored in. Hence the cost indicated by NDMC seems to be very much on the higher side.

Similarly, the other issues raised by NDMC need detailed assessment.

3.6 As per CPCB Guidelines, **capping of dumpsites is not advisable** as it would lead to generation of more leachates and methane/landfill gas generation which would further contaminate the already heavily contaminated Groundwater (Ground/ surface water reports at Annexure VIII to X). Further as per CPCB Guidelines, gas extraction is very difficult and inefficient when attempts are made to insert suction pipes into dumped waste instead of before dumping begins. Poor success at Gorai capping led to the forced refund by Mumbai city of Rs.15 crore advance carbon credits. Taking into consideration the present height (65 m) of the landfill, extraction of leachate & gas will be even more difficult.

3.7 In addition, in the present tender documents, there is no provision for onsite treatment of leachates and utilization of gas generated as also decontamination of ground water/bio-remediation have not been envisaged in spite of the fact that ground and surface water are heavily polluted as reflected by analysis of ground water and surface water reports given in the DPR. The details of analysis reports are given below:

(a) Table-I (Annexure-VIII) pertains to ground water sampling report of hand pumps which has indicated that average levels of BOD (2.4 mg/1), COD (28.0 mg/1), TDS (2783 mg/1) are more than the prescribed acceptable limit of zero for BOD, zero for COD and 500 mg/1 for TDS. Besides, the average high level of Residual Free Chlorine of 208.7 mg/1

(limit 0.2mg/l), Chlorides 769.7 mg/1 (limit 250 mg/1), Sulphate 228.2 mg/1 (limit 200mg/l), Alkalinity 508.7 mg/1 (limit 200 mg/1), Lead 0.2 mg/1 (limit 0.01 mg/1) and Nickel 0.1 mg/1 (limit 0.02mg/l) indicates that drinking water from the hand pumps has been significantly polluted and is not drinkable.

(b) Table-2 (Annexure-IX) reflects ground water analysis report pertaining to 18 boreholes. The average levels of BOD (93.11 mg/1), COD (783.72 mg/1) and TDS (6841.83 mg/1) were found more as against the acceptable limit of zero for BOD, zero for COD and 500 mg/1 for TDS indicating that ground water has been significantly contaminated due to percolation of leachates from the landfill.

(c) Table-3 (Annexure-X) pertains to analysis of surface water taken from Bhalsawa drain and Bhalsawa lake. The analysis report indicates that the average levels of BOD (68.40 mg/1), COD (547.51 mg/l) and TDS (4465.23 mg/l) were found higher as against the permissible limit for drinking water for BOD (0), COD (0) and TDS (500 mg/l) respectively indicating that surface water is significantly polluted due to discharge of untreated leachates. Besides, the average levels of residual free chlorine (179.60 mg/1, limit 0.2 mg/1), Iron (0.53 mg/1, limit 0.3), Chlorides (13119.04 mg/1, limit 250), Calcium (188.99 mg/1, limit 75), Alkalinity (1285.96 mg/1, limit 200), phenolic compound (0.07 mg/1, limit 0.001), Lead (0.15 mg/1, limit 0.01), Mercury (3.75 mg/1, limit 0.001) and Nickel (0.15 mg/1, limit 0.02) were found high indicating that surface water is very polluted and Bhalswa lake is not meeting the criteria for drinking water as toxic elements like phenolic compounds including heavy metals are present in the lake water. It is quite possible that the animals (buffalos, cows etc.) may be drinking lake water and as such the possibility of toxic chemicals and heavy metals entering the food chain cannot be over ruled. Therefore, lake water should not be used for drinking purposes by the human beings and the animals.

(d) Table-4(Annexure-XI) leachate emanating from the BLF indicates that BOD (500 mg/1), COD (2279 mg/1) & TDS (19000 mg/1) levels are higher in comparison to leachate standards of BOD (30 mg/1), COD (250 mg/1) & TDS (2100 mg/1) as prescribed in SWM Rules,2016.

- 3.8 There are various technologies available for treatment of MSW such as composting, bio-methanation, incineration coupled with power generation, gasification, pyrolysis, plasma arc gasification, molten salt oxidation (non-flame thermal process for destroying organic materials) etc.

4.0 Recommendations

- i. NDMC should do a detailed assessment of the alternative technological options including Bio-mining / Bio-remediation for Bhalswa dumpsite.
 - ii. Niti Aayog has constituted a Committee to identify the technologies in Solid Waste Management for Cleaning up of Delhi (Annexure XII). NDMC may consider the outcome of this committee's report in assessing options for Remediation of Bhalswa dumpsite.
 - iii. In case, capping of Bhalswa Dumpsite (which is not advisable as per CPCB Guidelines as mentioned at point 3.6 above) is proposed as the only option due to time and space constraints as also technoeconomic reasons, the DPR should be revisited especially to look into the following conditions:
 - (a) Bio-mining should be undertaken to the maximum extent possible without having significant adverse environmental impacts on the adjoining population.
 - (b) Bio-remediation/decontamination of surface, ground water and soil should also be undertaken in the affected areas.
 - (c) No dumping of MSW/Garbage (about 2000 tons/day) shall be done at Bhalswa dumpsite and alternate arrangements for disposal of this waste to be made by NDMC on priority in accordance with S WM Rules, 2016.”
9. We may note that as per information furnished during the hearing, the extent of legacy waste and the land covered by the three dump sites are as follow:
- i. East Delhi Ghazipur dumpsite- 1.4 crore metric tonne

approx. on 70 acres of land

ii. North Delhi *Bhalswa* dumpsite - 80 lakh metric tonne
approx. on 36 acres of land

iii. South Delhi *Okhla* dumpsite – 55-60 lakh metric tonne
approx. on 46 acres of land

10. Information made available from Indore Municipal Corporation is as follows:

“For screening purposes, trommels of 30 MT per hour capacities, are available in the market on rental basis. Necessary vehicles and equipments (like excavators, back-hoe loaders, dumpers, vibratory screens for dust removals and bundling machines for Refused Derived Fuel) are required for bio-mining and bio-remediation purposes. Normally, 20 trommels along with necessary machines and tools can process 5000 MT of legacy waste on daily basis in two shifts operation. Recently, Indore has successfully completed bio-mining/bio-remediation of 15 lakh MT legacy waste in 1 year. Rent for trommels paid by Indore to various machine manufacturers were in tune of Rs. 7.25 Lakh per trommel per month and bio-mining/bio-remediation process was followed as mentioned in the latest guidelines issued by the CPCB. Normally, the per metric ton cost of bio-remediation process of legacy waste will range between Rs. 300- 450 depending upon area to area.

In legacy waste sites where local bodies have space constraints can initially start the bio-mining/ bio-remediation options through mobile trommels.

Similarly, Ahmedabad Municipal Corporation has started the bio-mining/bio-remediation at Pirana dumping site and they are paying Rs. 6.40 Lakh per trommel per month.

The trommel machines are very simple in fabrication and can be fabricated as per the design mentioned in CPCB guidelines by local fabricators.

Instead of having multiple machines, it is advisable to have a single trommel of 16-20 MM bore size screen and reject conveyer should have blower. This will reduce the cost due to multiple trommeling. Also, to utilise the Refused Derived Fuel (‘RDF’) recovered from this process should be made free from dust. Thereafter RDF can be bundled and

sent to waste-to-energy plant and cement industries for further utilisation.

The recovered soil from the bio-mining/bio-remediation process can be used in filling the dead mines so as afforestation in the area can take place. Secondly, it can be used by National Highway Authorities/ State Road construction agencies and local bodies in sub-base filling.

Local bodies can install number of trommels at bio-remediation site based on availability of land and with time they can increase the number so as to complete the process as soon as possible.

Once the bio-mining and bio-remediation process starts, dumping of fresh garbage should be stopped at the legacy waste dumpsites, local bodies may identify a separate piece of land to process the fresh garbage through various processes mentioned in Municipal Solid Waste Management Rules, 2016 and guidelines issued by the CPCB. ”

11. In-Charge, Member Secretary, CPCB has similar view. Chief Secretary, Delhi suggests that a functional model may be preferred to any other option which has not been experienced on the ground.
12. We find merit in the model followed by Indore Municipal Corporation, the views of Member Secretary, CPCB and the Chief Secretary, Delhi. This opinion is also in consonance with the SWM Rules as well as the CPCB Guideline on Legacy Waste¹ and recent orders of this Tribunal. A conjoint reading of Rule 15 (zj), Rule 15(zk) and Clause J of Schedule I of the SWM Rules leaves room for capping of old dump sites, only in cases where there is “*absolute absence of potential of bio-mining and*

¹ Guidelines for Disposal of Legacy Waste (Old Municipal Solid Waste), Central Pollution Control Board, February 2019

bio-remediation” and not in cases of present nature where bio-mining and bio-remediation is possible. In cases of present nature, both *ex-situ* and *in-situ* bio-mining options can be exercised according to Indore Municipal Corporation, which is not only environmentally safe but cost effective. Though plea for capping legacy waste dumpsites is being raised frequently as a convenient mode, there may be hardly any situation when bio-remediation is not possible. The option of capping of legacy wastes, which has huge environmental and health consequences, in practical terms is no option at all, except for inert waste, which again is to be disposed in a scientific secured landfill. According to Indore Municipal Corporation, bio-mining as a treatment option is environmentally safe and does not require recurrent costs on account of leachate treatment in Effluent Treatment Plant (ETP). Furthermore, only peripheral leachate can be taken to the ETP and leachate percolating underneath the dumpsite contaminates ground water and water in subterranean space. Bio-mining as a treatment option in comparison to engineering capping of legacy wastes, is not only environmentally safe and holistic but also meets the yardstick of fiscal prudence and propriety.

13. Vide order dated 02.07.2019 in O.A. No. 113/2019, *Amit M. Panchal, Advocate vs. State of Gujarat*, the issue considered was of legacy waste in Ahmedabad at *Pirana* landfill site having more than 95 lakh metric tonnes on 84 acres of land with three

75 feet high mountains of waste. Having considered the information of dealing with the legacy waste at Indore, where the quantum of garbage was about 15 lakh metric tonne, it was assessed that the tentative cost of clearing the garbage at *Pirana* would be Rs. 75 Crores. At Indore, 15 lakh metric tonne garbage was reportedly cleared at the cost of Rs. 10 crores.

14. The above model was directed to be followed and a Committee was formed under Chief Secretary, Gujarat to ensure clearance of dump sites in six months and amount of Rs. 75 Crore was directed to be transferred to an ESCROW account².

15. Again, vide order dated 10.07.2019 in O.A. No. 514/2018, *Vivek Kamboj & Anr. vs. Union of India & Ors.*, the Tribunal dealt with the issue of legacy waste at Bandhwari, Gurugram where the waste was estimated to be 25 lakh metric tonne. The Tribunal assessed the cost of its handling on above pattern at Rs. 20 Crores and issued directions for making available such amount in an ESCROW account. The Tribunal also constituted a Committee headed by the Chief Secretary, Haryana with other expert members and fixed the timelines for executing the work.³

16. Following the said pattern, the estimated cost to clear the above three dump sites at Delhi may be approx. Rs. 250 Crores as follow:

² Para 14 in O.A 113/2019, order dated 02.07.2019

³ Para 17 & 18 in O.A 514/2018, order dated 10.07.2019

- i. EDMC Rs. 125 Crores
- ii. North MCD Rs. 75 Crores
- iii. SDMC Rs. 50 Crores

The cost of land involved and recovered may be thousands of crores.

17. The above amount of Rs. 250 Crores be transferred to three separate ESCROW accounts wherein contributions will be as follows:

i.	EDMC	i. NCT Delhi : Rs. 65 Crore ii. EDMC : Rs. 40 Crore iii. NDMC* : Rs. 10 Crore iv. DCB** : Rs. 10 Crore
ii.	North MCD	i. NCT Delhi : Rs. 35 Crore ii. North MCD : Rs. 30 Crore iii. NDMC : Rs. 05 Crore iv. DCB : Rs. 05 Crore
iii.	SDMC	i. NCT Delhi : Rs. 25 Crore ii. SDMC : Rs. 15 Crore iii. NDMC : Rs. 05 Crore iv. DCB : Rs. 05 Crore

*NDMC- New Delhi Municipal Corporation

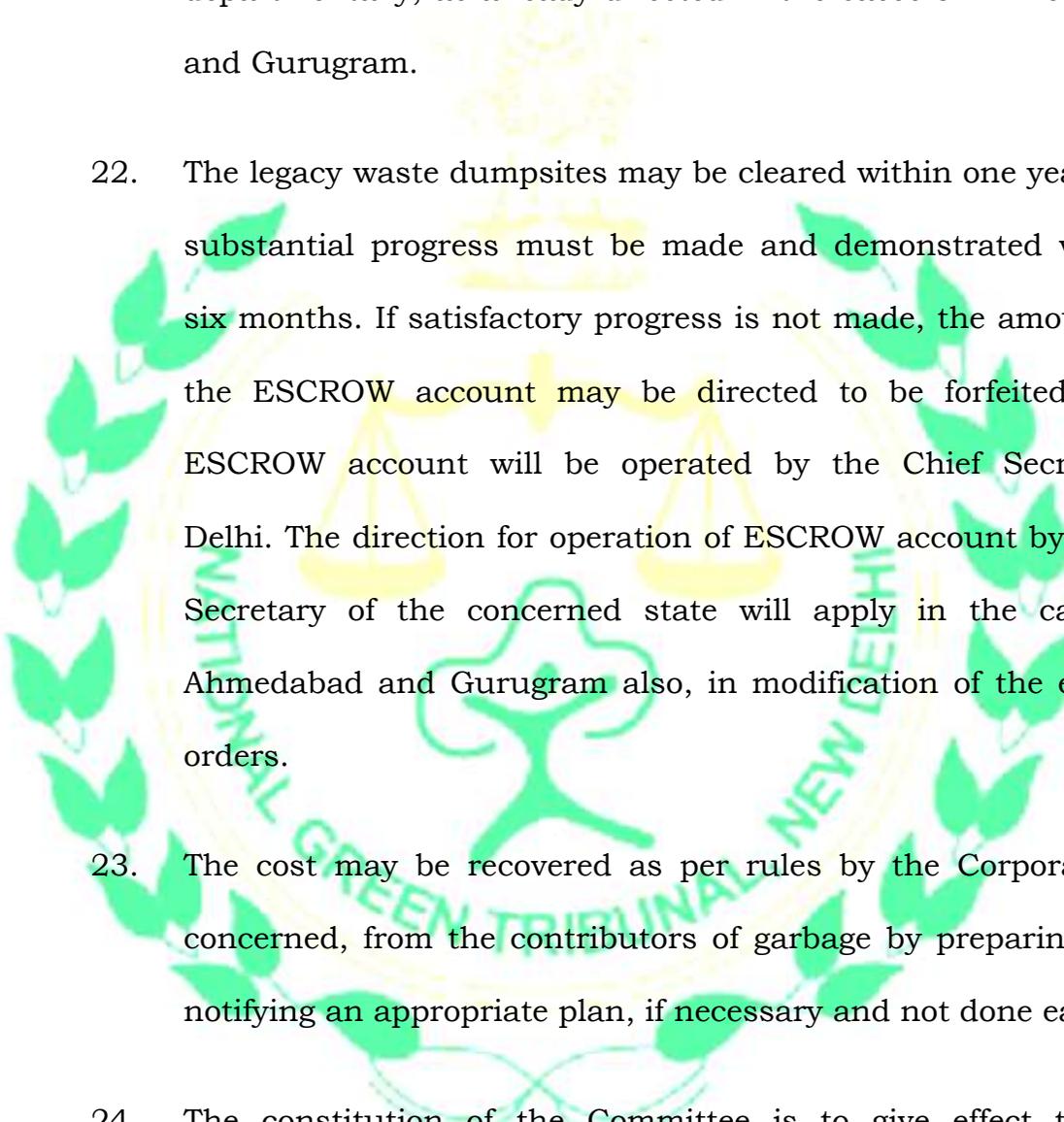
**DCB- Delhi Cantonment Board

18. The amount of contribution that NDMC and DCB is required to pay may not be proportionate to their respective garbage generation, but having regard to the practical considerations, we are requiring the above contribution on suggestion of the Chief Secretary, subject to dispute, if any being separately settled. The amount may be contributed positively without one month.

19. We direct constitution of the following Committee to deal with the matter:

- | | | | |
|-------|---|---|----------|
| i. | Chief Secretary, Delhi | - | Chairman |
| ii. | Finance Secretary, Delhi | - | Member |
| iii. | Secretary, Urban Development, Delhi
Convener | - | Member |
| iv. | Commissioner, EDMC | - | Member |
| v. | Commissioner, SDMC | - | Member |
| vi. | Commissioner, North MCD | - | Member |
| vii. | Chairman, NDMC | - | Member |
| viii. | CEO, Delhi Cantonment Board | - | Member |
| ix. | Member Secretary, CPCB | - | Member |
| x. | Chairman, DPCC | - | Member |

20. The Committee may co-opt any other technical persons/agencies. After removing legacy waste from the entire or part of the land, the Committee may consider using part of the recovered land for Integrated Waste Processing and Treatment Facility. At the periphery a bio-diversity park can be developed to improve the air quality and ambience. The Committee may have the Commissioner, Municipal Corporation, Indore or his nominee as a special invitee. The Committee may meet preferably within two weeks and after taking stock of the situation, plan to start further action. The work may actually commence from 01.10.2019 in view of ensuing monsoon.

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21. The work already awarded may be taken into account and if necessary, reviewed. Having regard to urgency of the situation, if Indore model is to be adopted, wholly or in part, the need for tender process can be dispensed with if the work is to be done departmentally, as already directed in the cases of Ahmedabad and Gurugram.
22. The legacy waste dumpsites may be cleared within one year but substantial progress must be made and demonstrated within six months. If satisfactory progress is not made, the amount of the ESCROW account may be directed to be forfeited. The ESCROW account will be operated by the Chief Secretary, Delhi. The direction for operation of ESCROW account by Chief Secretary of the concerned state will apply in the case of Ahmedabad and Gurugram also, in modification of the earlier orders.
23. The cost may be recovered as per rules by the Corporations concerned, from the contributors of garbage by preparing and notifying an appropriate plan, if necessary and not done earlier.
24. The constitution of the Committee is to give effect to the statutory mandate under the SWM Rules. Under Rule 14 (f) of the SWM Rules, the Central Pollution Control Board is bound to monitor through State Pollution Control Boards or Pollution Control Committees the implementation of these rules by local bodies. And the State PCBs/PCCs carry upon themselves the

duty to monitor environmental standards and adherence to conditions as specified under the Schedule I and Schedule II, of the SWM Rules, for waste processing and disposal sites.⁴ They additionally are required to prepare and submit the consolidated Annual Report to the Central Pollution Control Board and Ministry of Urban Development on the implementation of these rules and action taken against non-complying local body by the 31st day of July of each year.⁵ Rule 15 (w), (zi) and (zj) of the SWM Rules make local bodies responsible to deal with the matter. Under Rule 11 Urban Development Department of the State is to take necessary action. Article 243W read with Twelfth Schedule to the Constitution make local bodies responsible on the subject.

25. While the above order takes care of the matter listed today, it appears to be necessary that for protection of environment and public health, other such legacy waste dumpsites in the country are dealt with on the same pattern. This aspect has been gone into by the Tribunal in O.A. No. 606/2018 *Compliance of Municipal Solid Waste Management Rules, 2016, inter-alia* by order dated 16.01.2019 whereby Chief Secretaries of all the States/UTs were required to be present in person to deal with the issue of solid waste management and other concerned issues. Orders have been passed on different dates for all the States/UTs but since this order expressly deals with

⁴ Rule 16 (1)(b) of the Solid Waste Management Rules, 2016

⁵ Rule 23 (3) of the Solid Waste Management Rules, 2016

the issue of dumpsites and a pattern has now been evolved by way of guidelines issued by the CPCB in February 2019, referred to above, and Indore model, or other model for bio-mining/bio-remediation, is found to be suitable to be followed for other big dumps, the same may be followed which may be monitored by Chief Secretaries of concerned states. As per Annual Report of the CPCB (2016-2017)⁶ following information is available with regard to the dumpsites in each state:

Sr. No	States	Solid Wastes Dumpsites
		Total No. Of existing dumpsites
1.	Andaman Nicobar	1
2.	Andhra Pradesh*	-
3.	Arunachal Pradesh	2
4.	Assam	94
5.	Bihar	Data not available
6.	Chandigarh	1
7.	Chhattisgarh	75
8.	Daman and Diu*	-
9.	Delhi*	-
10.	Goa	3
11.	Gujarat	170
12.	Haryana	60
13.	Himachal Pradesh	50
14.	Jharkhand*	-
15.	Jammu & Kashmir*	-
16.	Karnataka	207

⁶ Consolidated Annual Report (For the Year 2016-2017) on Implementation of Solid Waste Management Rules, 2016, CPCB, April 2018

17.	Kerala*	-
18.	Nagaland	11
19.	Lakshadweep*	-
20.	Madhya Pradesh	381
21.	Maharashtra	271
22.	Manipur*	-
23.	Mizoram	01
24.	Meghalaya	6
25.	Odisha	2
26.	Punjab	160
27.	Pondicherry	3
28.	Rajasthan*	-
29.	Sikkim	2
30.	Tamil Nadu	499
31.	Telangana*	-
32.	Tripura	17
33.	Uttarakhand	2
34.	Uttar Pradesh*	-
35.	West Bengal	102
	Total	2120

*INR: Information Not Received

26. Particular information is available in public domain with regard to the following dumpsites:

Urban Agglomerations <i>(cities with more than 10 lakh population as per census 2011)</i>	States	Sr. no	Landfill/dump site
1. Mumbai	Maharashtra	(1)	Deonar
		(2)	Kanjurgmarg
2. Delhi	Delhi (UT)	(3)	Bhalswa
		(4)	Okhla
		(5)	Ghazipur
3. Kolkata	West Bengal	(6)	Dhapa
4. Chennai	Tamil Nadu	(7)	Kodungaiyur
5. Bangalore	Karnataka	(8)	Mavallipura

		(9)	Bellahalli
6. Hyderabad	Telangana	(10)	Jawahar Nagar
7. Ahmedabad	Gujarat	(11)	Pirana
8. Pune	Maharashtra	(12)	UruliDevachi
		(13)	Phursungi
9. Surat	Gujarat	(14)	Khajod
10. Kanpur	Uttar Pradesh	(15)	Panki
11. Lucknow	Uttar Pradesh	(16)	Shivri
		(17)	Ghaila Village
12. Nagpur	Maharashtra	(18)	Bhandewadi
		(19)	Kalmeshwar
13. Ghaziabad	Uttar Pradesh	(20)	Pratap Vihar
14. Indore			-
15. Coimbatore	Tamil Nadu	(21)	Vellalore
16. Kochi	Kerala	(22)	Kalamassery
17. Patna	Bihar	(23)	Ram ChakBairiya
18. Kozhikode	Kerala	(24)	Njeliyanparamba
19. Bhopal	Madhya Pradesh	(25)	Bhanpur
		(26)	AdampurChhawni
20. Thrissur	Kerala	(27)	Laloor
21. Vadodara	Gujarat	(28)	Jambuva
22. Agra	Uttar Pradesh	(29)	Kuberpur
23. Malappuram	Kerala	(30)	Theruvushala
24. Thiruvananthapuram	Kerala	(31)	Vilappilsala
25. Kannur	Kerala	(32)	Chelora
26. Nashik	Madhya Pradesh	(33)	KhatPrakalp
27. Vijayawada	Andhra Pradesh	(34)	Ajith Singh Nagar
28. Madurai	Tamil Nadu	(35)	Vellakal
29. Varanasi	Uttar Pradesh	(36)	Saraiyyabasti
30. Meerut	Uttar Pradesh	(37)	Ganwri Village
31. Rajkot	Gujarat	(38)	Nakrawadi
32. Jamshedpur	Jharkhand	(39)	Bara
33. Jabalpur	Madhya Pradesh	(40)	Ranital
		(41)	Kathonda
34. Srinagar	Jammu and Kashmir	(42)	Saidpora Achan
35. Asansol	West Bengal	(43)	Kalipahadi
		(44)	Samdihi
36. Allahabad	Uttar Pradesh	(45)	Baswar

37. Dhanbad	Jharkhand	(46)	Telipada
		(47)	Matkudiya
38. Aurangabad	Maharashtra	(48)	Madki Naregaon Village
39. Amritsar	Punjab	(49)	Bhagtanwala
40. Jodhpur	Rajasthan	(50)	Keru
41. Ranchi	Jharkhand	(51)	Jhiri Village
42. Raipur	Chhattisgarh	(52)	Sarona
43. Gwalior	Madhya Pradesh	(53)	Site in Gwalior-Shivpuri Road
44. Kollam	Kerala	(54)	Kureepuza
45. Durg and Bhilai Nagar	Chhattisgarh	(55)	Jamul
46. Chandigarh	Chandigarh (UT)	(56)	Dadu Majra
47. Tiruchirapalli	Tamil Nadu	(57)	Ariyamangalam

27. CPCB may compile latest data on the subject with the assistance of State PCBs/PCCs and Secretaries, Urban Development of all the States/UTs within one month from today and place the information of such dumpsites on its website.

28. The Chief Secretaries may ensure allocation of funds for processing of legacy waste and its disposal and in their respective next reports, give the progress relating to management of all the legacy waste dumpsites. Remediation work on all other dumpsites may commence from 01.11.2019 and completed preferably within six months and in no case beyond one year. Substantial progress be made within six months. We are conscious that the SWM Rules provide for a maximum period of upto five years for the purpose, however there is no reason why the same should not happen earlier, in

view of serious implications on the environment and public health⁷.

29. As per the data submitted by Ministry of Housing and Urban Affairs (MoHUA) in PMO report of December, 2017, a total of 1.45 lakh tonnes of municipal solid waste is generated per day in India. Out of this 1.22 lakh tonnes of waste is landfilled per day.⁸ Comments in public domain with regard to certain dump sites in the country are as follows:

A. Malkaram Lake was so highly polluted by leachate seeping from the legacy dump at Jawahar Nagar dump yard that the water turned black and the plant life in the lake was near-dead. During rains, the situation worsens as the overflowing lake pours its pollution into other water bodies in its network, including Dammaiguda Chervu and Pedda Chervu.⁹

B. Though known as Brahmapuram waste management plant, it has only been acting as a large garbage dump

⁷ (a) *What a Waste 2.0, Global Snapshot of Solid Waste Management to 2050*, World Bank Group, ISBN (paper): 978-1-4648-1329-0, 2018 International Bank for Reconstruction and Development / The World Bank, <http://datatopics.worldbank.org/what-a-waste/>. The report states- When waste is burned, the resulting toxins and particulate matter in the air can cause respiratory and neurological diseases, among others (Thompson 2014). Piles of waste produce toxic liquid runoff called leachate, which can drain into rivers, groundwater, and soil. Organic waste entering waterways reduces the amount of oxygen available and promotes the growth of harmful organisms (Bhada-Tata and Hoornweg 2016). Marine pollution is also increasing as a result of mismanaged solid waste on land, poor disposal practices by sea vessels, and runoff from sewage and polluted streams.

(b) <https://www.epw.in/engage/article/institutional-framework-implementing-solid-waste-management-india-macro-analysis> Several studies have been published that link asthma, heart attack, and emphysema to burning garbage. Human faecal matter is also frequently found in municipal waste—this, along with unmanaged decomposed garbage, attracts other rodents, that further lead to a spread of diseases such as dengue and malaria. Leachate from rotten garbage contains heavy metals and toxic liquid; with such emissions ending up either absorbed into the soil or flowing into water bodies today (Awasthi 2013), the entire food chain can be affected when this contaminated water is utilised for agriculture, human consumption and animal consumption.

⁸ <https://www.cprindia.org/sites/default/files/events/Rethinking%20waste%20valorization%20in%20fast%20growing%20middle%20income%20cities%20-%20Naveen%20Singh%2C%20MoHUA.pdf>

⁹ Dated 10.07.2018, <https://www.thehindu.com/news/cities/Hyderabad/jawahar-nagar-dump-yard-capping-by-april/article24374885.ece>

for many years. The garbage heaps spread across 16 acres of land have been posing a threat to people with recurrent fire outbreaks.¹⁰

C. Villagers staged protest to prevent trucks laden with garbage from reaching the quarry pit at Bellahalli.¹¹ A private plot of land in Ranka Colony off Bannerghatta Road has emerged as a waste dumpyard causing much inconvenience to local residents. Residents fear there is a disaster waiting to happen.¹²

D. It is not just the residents of Uruli Devachi and Phursungi (the dumping sites in Pune), who are troubled with flies, but also residents of Loni Kalbhor. During monsoon, the number of flies increases several folds, and the residents are facing several mosquito-borne ailments, like dengue and chikungunya.¹³

E. Fumes from burning solid waste at the Dhapa, Kolkata, is choking the residents.¹⁴ The smoke emitted from Dhapa is responsible for the unusual spike in air pollution recorded at the Victoria Memorial Hall station more than 10 km away.¹⁵

¹⁰Dated 02.07.2019, <https://www.thenewsminute.com/article/kochi-corp-biomine-legacy-waste-brahmapuram-sell-bio-residue-compost-104716>

¹¹Dated 24.06.2019, <https://www.thehindu.com/news/cities/bangalore/bellahalli-protest-called-off-dumping-resumes/article28119751.ece>

¹²Dated 17.11.2018, <https://www.thehindu.com/news/cities/bangalore/private-plot-off-bannerghatta-road-turns-into-dumpyard/article25527744.ece>

¹³Dated 23.07.2018, <https://www.hindustantimes.com/pune-news/garbage-dumpyard-pune-residents-to-agitate-on-august-2-to-end-27-year-ordeal-with-city-waste/story-5JqcdXjFvayGOPYOMoPY6O.html>

¹⁴Dated 18.01.2019, <https://www.ndtv.com/kolkata-news/kolkata-pollution-fumes-from-garbage-dump-makes-kolkata-raise-red-flag-against-pollution-1979378>

¹⁵ Dated 06.01.2019, <https://timesofindia.indiatimes.com/city/kolkata/kolkata-chokes-as-dhapa-fire-rages-unchecked-for-five-years/articleshow/67402725.cms>

30. Needless to say that potential hazard of dumpsites on public health and environment is more or less on the same pattern and earliest such dumpsites are cleared, sooner it is better for public health. Such dumpsites are undoubted source of air pollution resulting in respiratory and other diseases. Most vulnerable are the infants and the senior citizens. The right to breathe fresh air being part of right to life, delay in remedying the situation is not desirable. The plea of capping is being put forward on the ground of need for urgent remedial action, ignoring that doing so will perpetuate the adverse consequences of retaining non-biodegradable and other polluting components in the garbage eventually causing continuous damage to the soil and the ground water. Biological solutions have to be preferred over engineering solutions on the subject. However action has to be taken fast. Delay which has taken place so far is on account of inaction of the concerned authorities for which there is no justification.

31. It will also be appropriate to note that the scheme of the SWM Rules is to prevent collection of waste and instead, to ensure its segregation, treatment and disposal at the earliest and as far as possible at the source itself. If it is not done, the waste continues to be accumulated which becomes a challenge for the environment and public health. In this regard particular reference may be made to Rule 15 (zi). The authorities need to evolve a holistic strategy for integrated waste management in

the municipal planning which may result in 'zero waste' going to the landfill in terms of the said rules.¹⁶

32. We may also note that *Swachh Survekshan* is being carried out every year by MoHUA. It is imperative that such Survekshan takes cognizance of and reflects the compliance of SWM Rules.

33. An interim report of the steps taken may be furnished to the Tribunal by the Chief Secretary, Delhi within three months by e-mail at judicial-ngt@gov.in. The CPCB may also file its action taken report before the next date. Secretary, MoHUA may also file compliance report with regard to direction in para 32 above.

34. The Chief Secretary, Delhi and the Commissioners of the Municipal Corporations may remain present in person on the next date.

35. A copy of this order be sent to CPCB, all the Chief Secretaries, the MoEF&CC and MoHUA.

List for further consideration on 19.11.2019.

Adarsh Kumar Goel, CP

S.P. Wangdi, JM

¹⁶ Reference may also be made to- *Suggestive /Indicative "The National Action Plan for Municipal Solid Waste Management"*, Central Pollution Control Board, https://cpcb.nic.in/uploads/MSW/Action_plan.pdf.

K. Ramakrishnan, JM

Dr. Nagin Nanda, EM

July 17, 2019

Original Application No. 519/2019 with

Original Application No. 386/2019

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