

**BEFORE THE NATIONAL GREEN TRIBUNAL
PRINCIPAL BENCH AT NEW DELHI
ORIGINAL APPLICATION NO. 109 OF 2022**

IN THE MATTER OF:

VIVEK KAMBOJ & ANR.

...APPLICANTS

VERSUS

UNION OF INDIA AND ORS.

...RESPONDENTS

**ANNEXURES TO ADDITIONAL AFFIDAVIT DATED 16.05.2024
FILED BY THE APPLICANTS**

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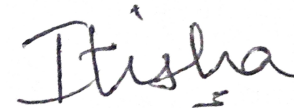
Through



RITWICK DUTTA



RAHUL CHOUDHARY



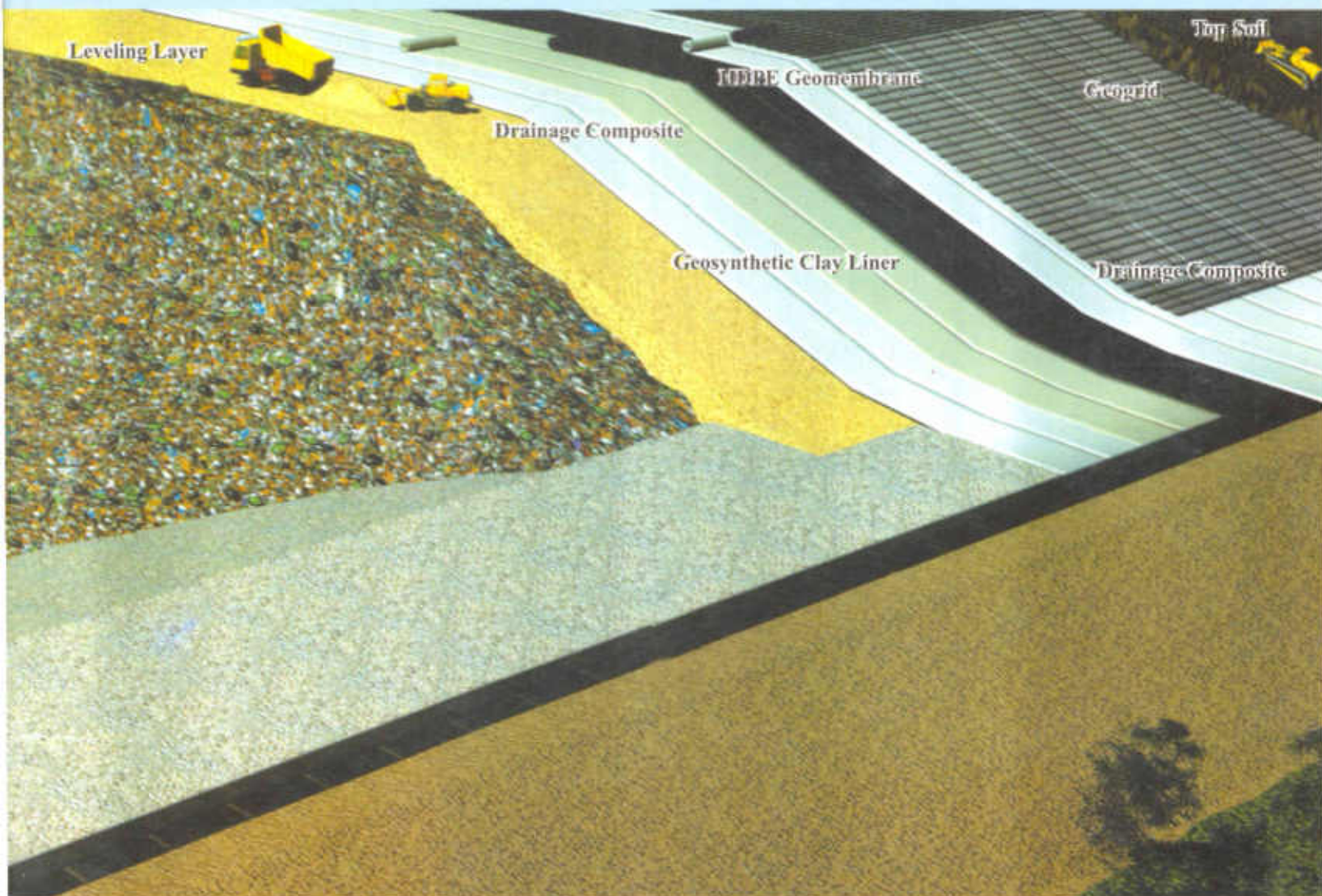
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Dated:- 31.08.2024

CRITERIA FOR HAZARDOUS WASTE LANDFILLS



**CENTRAL POLLUTION CONTROL BOARD
MINISTRY OF ENVIRONMENT & FORESTS**

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February, 2001

Hazardous Waste Management
Series : HAZWAMS/17/2000-01

CRITERIA FOR HAZARDOUS WASTE LANDFILLS



CENTRAL POLLUTION CONTROL BOARD

(Ministry of Environment & Forests, Govt. of India)

Parivesh Bhawan, East Arjun Nager

Delhi – 110 032

5.11. Gaseous Emissions Management

Landfill gas is generated as a product of waste biodegradation or on account of presence of VOCs in the waste. Gas generation can be reduced or eliminated by avoiding disposal of biodegradable/organic wastes. For HW landfills where gaseous emissions are anticipated (as in the case of mixed waste having biodegradable components), the gas management strategy shall be (a) controlled passive venting or (b) controlled collection and treatment/reuse.

5.12. Final Cover System

A final landfill cover, comprising of several layers, each with a specific function shall be installed after each landfill phase reaches the full height. The final cover system shall enhance surface drainage, minimise infiltration, support vegetation to prevent erosion and control the release of landfill gases. On the basis of a review of HW landfill covers adopted in different countries[#] and in consideration with Indian Conditions the cover system criteria listed in Section 7.0 be adopted in consultation with SPCB/PCC and commensurate with local area specified needs.

5.13. Surface Water Drainage System

Surface water management is required to ensure that rainwater run-off does not drain into the waste from surrounding areas and that there is no waterlogging/ponding on covers of landfills. A surface water drainage system comprising of channels, drains, culverts and basins (Fig.8) shall be designed to ensure the following :

- (a) Rainwater running off slopes above and outside the landfill area shall be intercepted and channelled to water courses without entering the operational area of the site. This diversion channel may require a low permeability lining to prevent leakage into the landfill.
- (b) Rain falling on active tipping areas shall be collected separately and managed as leachate, via the leachate collection drain and leachate collection sumps to the leachate treatment and disposal system.
- (c) Rainfall on areas within the landfill site, but on final covers of phases which have been completed and are not actively being used for waste disposal shall be diverted in drainage channels away from active tipping areas, and directed through a settling pond to remove suspended silt, prior to discharge.
- (d) Any drainage channels or drains constructed on the restored landfill surface shall be able to accommodate settlement, resist erosion and cope with localised storm conditions.

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during monsoon months shall be stockpiled in temporary holding area (covered). Alternatively special "monsoon phases" may be designed with high leachate holding capacity and operated using daily covers / temporary covers.

8.5. Pollution Prevention and Safety During Operation

The following measures are needed to ensure that the landfill operation shall not adversely affect local environment within and outside the landfill.

- (i) **Traffic** : Heavy lorry traffic shall give rise to nuisance, damage to road surface and verges and routing problems. The following measures are helpful :
 - (a) routing to avoid residential area
 - (b) using one-way routes to avoid traffic conflict in narrow roads
 - (c) carrying out road improvements, for example strengthening or widening roads, improved provision of footpaths, improvement of sight lines, provision of passing places, provision of new roads,
 - (d) Limiting the number of vehicle movements
 - (e) Restrictions on traffic movement hours which are staggered with respect to peak traffic hours.
- (ii) **Noise** : Adverse impacts on the local community from noise may arise from a number of sources including : throughput of vehicles and fixed and mobile plant, for example compactors, generators at the site. Peripheral noise abatement site measures shall be adopted.
- (iii) **Odour** : Offensive odours at landfill sites may emanate from a number of sources, including waste material, which have decomposed significantly prior to landfilling, leachates and leachate treatment systems, and landfill gas. Good landfill practices shall greatly reduce general site smell and reduce impact from odours which could lead to complaints from the local community, site users and site staff. Good practice includes : (a) adequate compaction; (b) speedy disposal and burial of malodorous wastes; (c) effective use of appropriate types of daily cover; (d) progressive capping and restoration; (e) effective landfill gas management; (f) effective leachate management and (g) consideration of prevailing wind direction when planning leachate treatment plants, gas flares, and direction of tipping.
- (iv) **Litter** : Poor litter control both on and off site is particularly offensive to neighbours. Good operational practice shall be adhered to in terms of temporary fencing, waste discharge, placement, compaction and covering to minimise the occurrence of windblown litter.
- (v) **Bird Control** : Birds are attracted to landfill sites in large numbers where sites receive appreciable amounts of bio wastes. Measures which can be used to mitigate birds nuisance include the employment

of good landfill practice, working in small active areas and progressive prompt covering of waste, together with the use of bird scaring techniques.

- (vi) **Vermin and Other Pests** : Landfills have potential to harbour flies, rodents and vermin, particularly where the waste contains bio materials. Modern landfilling techniques including prompt emplacement, compaction and covering of wastes in well defined cells are effective in the prevention of infestation by rodents and insects.
- (vii) **Dust** : Dust from landfill operations is mainly a problem during periods of dry weather but can also arise from dusty waste as it is tipped. Dust is generally associated with (a) site preparation and restoration activities; (b) the disposal of waste comprising of fine particles, for example powders; and (c) traffic dust. Dust suppression can be effected by (a) limiting vehicle speed; (b) spraying roads with water; and (c) spraying site and powder type waste with water; (d) covering powder type waste with daily soil cover.
- (viii) **Mud on the Road** : Mud on the public highway is one of the most common causes of public complaint. It is therefore, in the interest of the landfill operator to provide adequate wheel cleaning facilities to ensure that mud is not carried off site by vehicles.
- (ix) **Landfill Fire Management** : Fires in waste on landfill sites are not uncommon and it is important for site operators to be aware of the dangers, how to treat fires and to address the problems associated with them. All fires on-site shall be treated as a potential emergency and dealt with accordingly.
- (x) **Landfill Safety Aspects** : Training of employees shall include site safety, first aid and the handling of dangerous materials where appropriate. Since landfill sites can pose dangers to both site operator and users, emergency plans shall be laid down. Landfill sites shall be regarded as potentially hazardous locations and the operator shall have a written safety plan for the site. Safety hazards present at landfill sites may include : (a) moving plant and vehicle; (b) steep slopes; (c) bodies of standing water; (d) contaminated, putrescible, toxic, flammable or infective material and (e) noxious, flammable, toxic or hazardous gas. All employees and visitors to the site shall be made aware of the potential hazards and the safety procedures to be implemented including fire safety.

8.6. Phase Closure

After the last set of cells of a phase are placed (on the highest lift), an intermediate or final cover shall be constructed. If another phase is to be placed over the just completed phase, an intermediate cover is provided. However if the just completed phase has reached the final

The owner/operator shall demonstrate the funds needed for (c), (d) and (e) above will be available whenever they are needed in the form of options such as trust funds, surety bonds, letter of credit, insurance etc.

12.0. CONTINGENCY PLAN FOR EMERGENCIES

The owner/operator of a HW landfill shall prepare a contingency plan listing procedures to be executed immediately whenever there is fire, explosion or unexpected release of hazardous waste at the landfill site during the active period as well as during the closure and post-closure periods. Such a contingency plan shall be approved by the SPCB/PCC.

OFFICE OF DIVISIONAL WILD LIFE OFFICER,
GURUGRAM.

FOREST COMPLEX-SOHNA ROAD, NEAR CIVIL COURTS, GURUGRAM.
PHONE-FAX NO. 0124-2222272, E-mail ID- dwloggn@gmail.com

No. 124

Dated- 2/5/24

To

Chief Conservator of Forests (wild life)
Gurugram.

Subject: - About 1 km long black river of death with toxic fluids/leachate flowing continuously in Arravallis Bandhwari from the landfill.

Ref: - Your office letter no. 611 dated- 15.09.2023

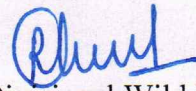
In reference to the above cited subject this office constituted a committee for submitting detail report after thorough inspection of land fill and surrounding forest area. After inspection, the committee submitted his report to this office. As per committee report, the revenue rasta going through the forest area, start from land fill that ends in Damdma get blocked due to filling solid waste over it from land fill which encroached the revenue rasta completely and also spreading in nearby forest area. This revenue rasta was used for vehicles like tractor tanker, truck tanker for filling water inside the forest area during the summer and for patrolling by forest officials but due to this blockage the vehicles will not be able to go inside the forest area for necessary task. Along the right side of land fill site flow of leachate/dirty fluid can be seen flowing inside the forest area which is getting collected in depressions. One another pond was there back side of land fill inside the forest area which was the source of drinking water for wild animals which is now filled with dirty fluid/leachate. This dirty fluid/leachate may be consumed by the wild animals living inside the forest area which can be a threat to their life as the test report by HSPCB Lab. Sec.-16 A, Faridabad is proving this. Regarding the release of leachate and other waste inside forest area from land fill, this office continuously getting complaints from wild life enthusiasts and naturalist and in response of these complaints, this office has written multiple times to Commissioner, MCG for abiding the conditions laid in Wildlife NOC for proper management of landfill site but no improvement is seen since four years. As per the inspection report and news reports from different news papers, this office comes to know

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that the Bandhwari land fill is burning since last 15 days. The forest area surrounding the land fill have rich biodiversity and good number of wild animals and because of all the above irregularities at landfill site the wildlife habitat getting disturbed and distructed and it will increase the man-animal conflict in Gurugram and surrounding area.

So on the basis of above facts, this office recommends for writing to the Commissioner, MCG that the wild life NOC given for this project may be withdrawn if all the above mentioned irregularities remain continue.



Divisional Wild Life Officer
Gurugram.