

MAHARASHTRA POLLUTION CONTROL BOARD

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RED/L.S.I ()
**No:- Format1.0/CC/UAN No.MPCB-
CONSENT-0000154554/CO/2306001944**

Date: 26/06/2023

To,
**Green Gene Enviro Protection and Infrastructure
Pvt. Ltd., Plot No. B-18, Shalgaon Bombalewadi
Industrial Area, Sangli, Tal. & Dist. Sangli**



Sub: Consent to Operate under RED / LSI Category.

- Ref:**
1. Consent to Establish granted by Board vide No. Format 1.0/BO/RO-HQ/CC-1707001197 dated 28/07/2017.
 2. Amendment in Consent to Establish granted by Board vide No. BO/ROHQ/CE/Amendment/CC-0413 dated 18/08/2018.
 3. Amendment in Consent to Establish granted by Board vide No. BO/ROHQ/CE/Amendment/E-2103000037 dated 22/03/2021.
 4. Revalidation of consent to establish granted by Board vide No. Format1.0/CC/UAN No.0000144208/CE/2212001833 dated 26/12/2022.
 5. Minutes of sixth meeting of consent committee held on 07/06/2023.

Your application No.MPCB-CONSENT-0000154554 Dated 29.11.2022

For: grant of Consent to Operate under Section 26 of the Water (Prevention & Control of Pollution) Act, 1974 & under Section 21 of the Air (Prevention & Control of Pollution) Act, 1981 and Authorization under Rule 6 and Rule 18(7) of the Hazardous & Other Wastes (Management & Transboundary Movement) Rules 2016 is considered and the consent is hereby granted subject to the following terms and conditions and as detailed in the schedule I, II, III & IV annexed to this order:

1. **The consent to operate is granted for a period up to 31/05/2028**
2. **The capital investment of the project is Rs.45.08 Crs. (As per C.A Certificate submitted by industry Existing CI is Rs. 25.4335 Crs + Increase in C. I. Rs. 19.65 Crs)**
3. **Consent is valid for the manufacture of:**

Sr No	Product	Maximum Quantity	UOM
Products			
1	Alternate Fuel from Organic Incinerable Hazardous Waste	160000	MT/A
2	Alternate Fuel from Inorganic Hazardous waste	55000	MT/A
3	Alternate Fuel from Non-hazardous Waste	60000	MT/A

4. **Conditions under Water (P&CP), 1974 Act for discharge of effluent:**

Sr No	Description	Permitted (in CMD)	Standards to	Disposal Path
1.	Trade effluent	15	As per Schedule-I	Treated effluent shall be 100 % recycled to achieve zero liquid discharge.
2.	Domestic effluent	13	As per Schedule-I	On land for gardening.

5. **Conditions under Air (P& CP) Act, 1981 for air emissions:**

Sr No.	Stack No.	Description of stack / source	Number of Stack	Standards to be achieved
1	S-1	DG Set (125 KVA)	1	As per Schedule -II

6. **Non-Hazardous Wastes:**

Sr No	Type of Waste	Quantity	UoM	Treatment	Disposal
1	STP Sludge	2	Kg/Day	Drying	Use as manure for plantation

7. **Conditions under Hazardous & Other Wastes (M & T M) Rules 2016 for Collection, Segregation, Storage, Transportation, Treatment and Disposal of hazardous waste:**

Sr No	Category No./ Type	Quantity	UoM	Treatment	Disposal
1	26.1 Process waste sludge/residues containing acid, toxic metals, organic compounds	2000	Kg/M	----	CHWTSDF
2	33.1 Empty barrels /containers /liners contaminated with hazardous chemicals /wastes	1000	No/M	----	CHWTSDF
3	35.3 Chemical sludge from waste water treatment	4	Kg/Day	----	CHWTSDF

8. The Board reserves the right to review, amend, suspend, revoke this consent and the same shall be binding on the industry.

9. This consent should not be construed as exemption from obtaining necessary NOC/ permission from any other Government authorities.

10. Project Proponent shall provide online monitoring system for monitoring BOD & SS parameters to STP outlet.

11. Project Proponent shall strictly follow guideline for pre-processing and co-processing of Hazardous & Other Wastes in Cement Plants published by Central Pollution Control Board as per H & OW (M & TBM) Rules, 2016.

12. This consent is issued pursuant to the decision of the Sixth Meeting of the Consent Committee held on 07/06/2023.

13. Industry shall apply for renewal of this Consent 60 days prior to the validity of this consent.

14. The industry shall obtain permission from Directorate of Industrial Safety & Health (DISH).

15. Project Proponent shall send details of pre-processing waste disposal on monthly basis to Regional Officer & Sub-Regional Officer regularly.
 16. Project Proponent shall accept the Hazardous Waste only from those industries having disposal path mentioned in their consent for pre-processing only.
 17. This consent is issued as per the letter for delegation of authority to sign the consents under purview of Consent Committee & Consent Appraisal Committee to Head of the Department as per sector wise distribution towards head of the departments vide No. MPCB/AS(T)/B-0107 dated 03/11/2022.
- . This consent is issued as per communication letter dated 03/11/2022 which is approved by competent authority of the board.

Received Consent fee of -

Sr.No	Amount(Rs.)	Transaction/DR.No.	Date	Transaction Type
1	375000.00	TXN2211004278	30/11/2022	Online Payment
2	50000.00	TXN2306001741	13/06/2023	Online Payment

Copy to:

1. Regional Officer, MPCB, Kolhapur and Sub-Regional Officer, MPCB, Sangli
- They are directed to ensure the compliance of the consent conditions.
2. Chief Accounts Officer, MPCB, Sion, Mumbai

SCHEDULE-I

Terms & conditions for compliance of Water Pollution Control:

1. A] As per your application, you have provided Effluent Treatment Plant (ETP) of designed capacity of 30.00 CMD consisting of Primary (Collection tank, Equalization tank), Tertiary (Pressure sand filter, Activated carbon filter), Sludge treatment (Sludge drying bed) for the treatment of 15 CMD of trade effluent.

B]

Sr.No	Parameters	Limiting concentration not to exceed in mg/l, except for pH
(1)	pH	6.0 -8.5
(2)	BOD (3 days 27°C)	30
(3)	COD	250
(4)	Oil & Grease	10
(5)	Suspended Solids	100
(6)	Residual Chlorine	1
(7)	NH ₃ (as N)	50
(8)	TKN (an N)	100
(9)	Arsenic (as As)	0.2
(10)	Mercury (as Hg)	0.01
(11)	Lead (as Pb)	1
(12)	Cadmium (as Cd)	2
(13)	Total Chromium (as Cr)	2
(14)	Copper (as Cu)	3
(15)	Zinc (as Zn)	15
(16)	Selenium (as Se)	0.05
(17)	Nickel (as Ni)	5
(18)	Cyanide (as CN)	0.2
(19)	Fluoride (as F)	15
(20)	Sulphide (as S)	5
(21)	Pesticides	Absent
(22)	Phenolic Compound (as C ₆ H ₅ OH)	5

- C] The treated effluent shall be recycled for secondary purposes within premise after confirming above standards. In no case, effluent shall find its way for gardening / outside factory premises.

2. A] As per your application, you have provided Sewage Treatment Plant of designed capacity 15 CMD for the treatment of 13 CMD of sewage.

- B] The Applicant shall operate the sewage treatment system to treat the sewage so as to achieve the following standards.

Sr.No	Parameters	Standards (mg/l)	
1	Suspended Solids	Not to exceed	50
2	BOD 3 days 27°C	Not to exceed	30
3	COD	Not to exceed	100

C] The treated sewage shall be recycled for secondary purposes to the maximum extent and remaining shall be discharged on land for gardening within premise after confirming above standards. In no case, sewage shall find its way for gardening / outside factory premises.

3. The Board reserves its rights to review plans, specifications or other data relating to plant setup for the treatment of waterworks for the purification there of & the system for the disposal of sewage or trade effluent or in connection with the grant of any consent conditions. The Applicant shall obtain prior consent of the Board to take steps to establish the unit or establish any treatment and disposal system or an extension or addition thereto.
4. The industry shall ensure replacement of pollution control system or its parts after expiry of its expected life as defined by manufacturer so as to ensure the compliance of standards and safety of the operation thereof.
5. The Applicant shall comply with the provisions of the Water (Prevention & Control of Pollution) Act, 1974 and as amended, by installing water meters and other provisions as contained in the said act:

Sr. No.	Purpose for water consumed	Water consumption quantity (CMD)
1.	Industrial Cooling, spraying in mine pits or boiler feed	0.00
2.	Domestic purpose	20.00
3.	Processing whereby water gets polluted & pollutants are easily biodegradable	20.00
4.	Processing whereby water gets polluted & pollutants are not easily biodegradable and are toxic	0.00
5.	Gardening	0

6. The Applicant shall provide Specific Water Pollution control system as per the conditions of EP Act, 1986 and rule made there under from time to time/ Environmental Clearance/ CREP guidelines.

SCHEDULE-II

Terms & conditions for compliance of Air Pollution Control:

1. As per your application, you have provided the Air pollution control (APC) system and erected following stack (s) to observe the following fuel pattern:

Stack No.	Source	APC System provided/proposed	Stack Height(in mtr)	Type of Fuel	Sulphur Content(in %)	Pollutant	Standard
S-1	DG Set	Acoustic Enclosure	3.50	Diesel 27 Kg/Hr	1	SO2	12.96 Kg/Day

2. The Applicant shall provide Specific Air Pollution control equipments as per the conditions of EP Act, 1986 and rule made there under from time to time/ Environmental Clearance / CREP guidelines.
3. The applicant shall operate and maintain above mentioned air pollution control system, so as to achieve the level of pollutants to the following standards:

Parameters	Standards (unit)	
Total Particulate Matter	Not to exceed	150 mg/ Nm3

4. The Applicant shall obtain necessary prior permission for providing additional control equipment with necessary specifications and operation thereof or alteration or replacement/alteration well before its life come to an end or erection of new pollution control equipment.
5. The Board reserves its rights to vary all or any of the condition in the consent, if due to any technological improvement or otherwise such variation (including the change of any control equipment, other in whole or in part is necessary).

SCHEDULE-III

Details of Bank Guarantees:

Sr. No.	Consent (C2E/C2O/C2R)	Amt of BG Imposed	Submission Period	Purpose of BG	Compliance Period	Validity Date
1	Consent to Establish	5.0 Lakhs	Already Submitted, Valid up to 11/08/2023	Compliance of consent conditions	Continuous	Five years (validity of consent)

****Existing BG obtained for above purpose if any, may be extended for period of validity as above.**

BG Forfeiture History

Srno.	Consent (C2E/C2O/C2R)	Amount of BG imposed	Submission Period	Purpose of BG	Amount of BG Forfeiture	Reason of BG Forfeiture
NA						

BG Return details

Srno.	Consent (C2E/C2O/C2R)	BG imposed	Purpose of BG	Amount of BG Returned
NA				

SCHEDULE-IV
General Conditions:

1. The Energy source for lighting purpose shall preferably be LED based.
2. The PP shall harvest rainwater from roof tops of the buildings and storm water drains to recharge the ground water and utilize the same for different industrial applications within the plant
3. Conditions for D.G. Set
 - a) Noise from the D.G. Set should be controlled by providing an acoustic enclosure or by treating the room acoustically.
 - b) Industry should provide acoustic enclosure for control of noise. The acoustic enclosure/ acoustic treatment of the room should be designed for minimum 25 dB (A) insertion loss or for meeting the ambient noise standards, whichever is on higher side. A suitable exhaust muffler with insertion loss of 25 dB (A) shall also be provided. The measurement of insertion loss will be done at different points at 0.5 meters from acoustic enclosure/room and then average.
 - c) Industry should make efforts to bring down noise level due to DG set, outside industrial premises, within ambient noise requirements by proper siting and control measures.
 - d) Installation of DG Set must be strictly in compliance with recommendations of DG Set manufacturer.
 - e) A proper routine and preventive maintenance procedure for DG set should be set and followed in consultation with the DG manufacturer which would help to prevent noise levels of DG set from deteriorating with use.
 - f) D.G. Set shall be operated only in case of power failure.
 - g) The applicant should not cause any nuisance in the surrounding area due to operation of D.G. Set.
 - h) The applicant shall comply with the notification of MoEFCC, India on Environment (Protection) second Amendment Rules vide GSR 371(E) dated 17.05.2002 and its amendments regarding noise limit for generator sets run with diesel.
4. The applicant shall maintain good housekeeping.
5. The non-hazardous solid waste arising in the factory premises, sweepings, etc. be disposed of scientifically so as not to cause any nuisance / pollution. The applicant shall take necessary permissions from civic authorities for disposal of solid waste.
6. The applicant shall not change or alter the quantity, quality, the rate of discharge, temperature or the mode of the effluent/emissions or hazardous wastes or control equipments provided for without previous written permission of the Board. The industry will not carry out any activity, for which this consent has not been granted/without prior consent of the Board.
7. The industry shall ensure that fugitive emissions from the activity are controlled so as to maintain clean and safe environment in and around the factory premises.
8. The industry shall submit quarterly statement in respect of industries obligation towards consent and pollution control compliance's duly supported with documentary evidences (format can be downloaded from MPCB official site).
9. The industry shall submit official e-mail address and any change will be duly informed to the MPCB.
10. The industry shall achieve the National Ambient Air Quality standards prescribed vide Government of India, Notification No. B-29016/20/90/PCI-L dated. 18.11.2009 as amended.
11. The Board reserves its rights to review plans, specifications or other data relating to plant setup for the treatment of waterworks for the purification thereof & the system for the disposal of sewage or trade effluent or in connection with the grant of any consent conditions. The Applicant shall obtain prior consent of the Board to take steps to establish the unit or establish any treatment and disposal system or an extension or addition thereto.

12. The industry shall ensure replacement of pollution control system or its parts after expiry of its expected life as defined by manufacturer so as to ensure the compliance of standards and safety of the operation thereof.
13. The PP shall provide personal protection equipment as per norms of Factory Act 1948
14. Industry should monitor effluent quality, stack emissions and ambient air quality monthly/quarterly.
15. Whenever due to any accident or other unforeseen act or even, such emissions occur or is apprehended to occur in excess of standards laid down, such information shall be forthwith Reported to Board, concerned Police Station, office of Directorate of Health Services, Department of Explosives, Inspectorate of Factories and Local Body. In case of failure of pollution control equipments, the production process connected to it shall be stopped.
16. The applicant shall provide an alternate electric power source sufficient to operate all pollution control facilities installed to maintain compliance with the terms and conditions of the consent. In the absence, the applicant shall stop, reduce or otherwise, control production to abide by terms and conditions of this consent.
17. The industry shall recycle/reprocess/reuse/recover Hazardous Waste as per the provision contain in the Hazardous and Other Wastes (M & TM) Rules 2016, which can be recycled /processed /reused /recovered and only waste which has to be incinerated shall go to incineration and waste which can be used for land filling and cannot be recycled/reprocessed etc. should go for that purpose, in order to reduce load on incineration and landfill site/environment.
18. An inspection book shall be opened and made available to the Board's officers during their visit to the applicant.
19. Industry shall strictly comply with the Water (P&CP) Act, 1974, Air (P&CP) Act, 1981 and Environmental Protection Act, 1986 and industry specific standard under EP Rules 1986 which are available on MPCB website (www.mpcb.gov.in).
20. Separate drainage system shall be provided for collection of trade and sewage effluents. Terminal manholes shall be provided at the end of the collection system with arrangement for measuring the flow. No effluent shall be admitted in the pipes/sewers downstream of the terminal manholes. No effluent shall find its way other than in designed and provided collection system.
21. Neither storm water nor discharge from other premises shall be allowed to mix with the effluents from the factory.
22. The industry should not cause any nuisance in surrounding area.
23. The industry shall take adequate measures for control of noise levels from its own sources within the premises so as to maintain ambient air quality standard in respect of noise to less than 75 dB (A) during day time and 70 dB (A) during night time. Day time is reckoned in between 6 a.m. and 10 p.m. and night time is reckoned between 10 p.m. and 6 a.m.
24. The industry shall create the Environmental Cell by appointing an Environmental Engineer, Chemist and Agriculture expert for looking after day to day activities related to Environment and irrigation field where treated effluent is used for irrigation.
25. The applicant shall provide ports in the chimney/(s) and facilities such as ladder, platform etc. for monitoring the air emissions and the same shall be open for inspection to/and for use of the Board's Staff. The chimney(s) vents attached to various sources of emission shall be designated by numbers such as S-1, S-2, etc. and these shall be painted/ displayed to facilitate identification.

26. The industry should comply with the Hazardous and Other Wastes (M & TM) Rules, 2016 and submit the Annual Returns as per Rule 6(5) & 20(2) of Hazardous and Other Wastes (M & TM) Rules, 2016 for the preceding year April to March in Form-IV by 30th June of every year.
27. The applicant shall install a separate meter showing the consumption of energy for operation of domestic and industrial effluent treatment plants and air pollution control system. A register showing consumption of chemicals used for treatment shall be maintained.
28. The applicant shall bring minimum 33% of the available open land under green coverage/ plantation. The applicant shall submit a yearly statement by 30th September every year on available open plot area, number of trees surviving as on 31st March of the year and number of trees planted by September end.
29. The Board reserves its rights to review plans, specifications or other data relating to plant setup for the treatment of waterworks for the purification thereof & the system for the disposal of sewage or trade effluent or in connection with the grant of any consent conditions.
30. The firm shall submit to this office, the 30th day of September every year, the Environment Statement Report for the financial year ending 31st March in the prescribed FORM-V as per the provisions of Rule 14 of the Environment (Protection) (second Amendment) Rules, 1992.
31. You shall obtain necessary prior permission for providing additional control equipment with necessary specifications and operation thereof or alteration or shall ensure replacement of pollution control system or its parts after expiry of its expected life as defined by manufacturer so as to ensure the compliance of standards and safety of the operation thereof.
32. The Board reserves its rights to vary all or any of the condition in the consent, if due to any technological improvement or otherwise such variation (including the change of any control equipment, other in whole or in part is necessary).
33. The applicant shall provide facility for collection of environmental samples and samples of trade and sewage effluents, air emissions and hazardous waste to the Board staff at the terminal or designated points and shall pay to the Board for the services rendered in this behalf.

This certificate is digitally & electronically signed.

SCHEDULE-V

Solid / Hazardous Waste Generation Condition

- 1) Waste residue generated from process shall be reused. Toxicified drums shall be sold out.
- 2) The proponent shall provide storage facilities as per CPCB guideline for storage of incinerable hazardous wastes. Bottom and drain of storage area shall be lined with HDPE lines so as to prevent groundwater contamination as proposed.
- 3) The proponent shall ensure uniform composition of fuels to be sent to cement units for co-processing. The remaining hazardous waste / residues shall be sent to CHWTSDF.
- 4) The proponent shall provide adequate lab facility with provisions of fingerprinting analysis and hazardous waste compatibility. Proponent shall maintain records of analysis.
- 5) The proponent shall submit the list of member units at regular intervals along with details of chemical composition, characteristic and quantification of waste received from respective members.
- 6) The proponent shall regularly monitor groundwater, ambient quality and shall submit the report to MPCB.
- 7) The proponent shall maintain record of rejected waste and the rejected waste shall be sent back to the generator industry by the authorized vehicle.
- 8) The proponent shall maintain the records of hazardous waste collection, process and transport to cement units.
- 9) The proponent shall not carry out any chemical reactions with hazardous waste.
- 10) The industry shall comply with all the directions issued by the Board from time to time

Packaging of Hazardous & Other Wastes

The containers utilized for storing and handling Hazardous and Other Wastes for the purpose of co-processing must be able to withstand normal handling and retain integrity for a minimum period of six months. In general, packaging of hazardous substances must meet the following requirements:

- 1) All packaging materials including containers shall be of such strength, construction and type as not to break or open or become defective during transportation.
- 2) All packaging materials including containers shall be so packed and sealed that spillages of hazardous wastes / substances are prevented during transportation due to jerks and vibrations caused by uneven road surface.
- 3) Re-packing materials including that used for fastening must not be affected by the contents of form a dangerous combination with them.
- 4) Packaging material should be such that there will be no significant chemical or galvanic action among any of the material in the package.
- 5) Bulk transportation of hazardous waste in trucks without suitable packaging or containers shall not be allowed.
- 6) The containers when used for packaging of the hazardous & other wastes shall meet the following requirements.
 - (a) Container shall be of mild steel with suitable corrosion-resistant coating and roll-on roll-off cover, which may either be handled by articulated crane or by a hook lift

system comfortably for a large variety of wastes. Other modes of packaging, like collection in 22-liter plastic or steel drums, PP and HDPE /LDPE containers, HDPE liner bags etc. also work for variety of wastes. However, all such containers should be amenable to mechanical handling.

- (b) It should be leak-proof.
- (c) In general, the containers for liquid hazardous waste should be completely closed / sealed. There should be no gas generation due to any chemical reaction within the container and thus should be devoid of air vents.
- (d) Container should be covered with a solid lid or a canvas to avoid emissions of any sort including spillage, dust etc. and to minimize odour generation both at the point of loading as well as during transportation.
- (e) Container used for transportation of waste should be able to withstand the shock loads due to vibration effect / undulations of pavements etc.
- (f) Container should be easy to handle during transportation and emptying.
- (g) As far as possible, manual handling of containers should be minimized. Appropriate material handling equipment is to be used to load, transport and unload the containers. Drums should not be rolled on or off vehicles. Preferably equipment such as forklift and pallets shall be used.
- (h) Where a two tier or three tier storage is envisaged, the frame should have adequate strength to hold the containers. Palletised drums may be stacked not more than 2 layers high in the transport vehicle.
- (i) One-way containers (especially 16-liter drums) are also allowed. The multi-use containers should be re-usable provided it should be cleaned and free from deterioration or defects.
- (j) Loads are to be properly placed on vehicles. Hazardous & other waste containers are not to overhang, perch lean or to be placed in another unstable base. Load should be secured with straps, clamps, braces or other measures to prevent movement and loss. Design of the container should be such that it can be safely accommodated on the transport vehicle.
- (k) Non-compatible wastes shall not be collected in the same container. These wastes shall be segregated and packed separately. Non-compatible wastes shall not be transported together under any circumstances.

Labelling of Hazardous & Other Wastes

There are two types of labelling requirements:

- 1) Labelling of individual transport containers (ranging from a pint-sizer to a tank)
- 2) Labelling of transport vehicles

All hazardous & other waste containers must be clearly marked with the contents. The marking must be irremovable, waterproof and firmly attached. Previous content labels shall be obliterated when the contents are different. Proper marking of containers is essential.

Containers that contain hazardous waste shall be labelled with the words 'HAZARDOUS WASTE' in vernacular language Hindi / English. The information on the label must include the code number of the waste, the waste type, the origin (name, address, telephone number of generator), hazardous property (e. g. flammable), and the symbol for the hazardous property (e. g. the red square with flame symbol).

The label must withstand the effect of rain and sun. Labelling of containers is important for tracking the wastes from the point of generation up to the final point of disposal. The following are the requirements for labelling.

- (a) The label should contain the name and address of the occupier and facility where it is being sent for pre-processing or co-processing i. e. labelling of container shall be provided with a general label as per Form 8 of the H & OW (M & TBM) Rules, 2016.
- (b) Emergency contact phone numbers shall be prominently displayed viz. the phone number of concerned officer of the sender and receiver. Regional officer of the SPCB / PCC, Fire station, Police station and other concerned agencies.

Collection and Transportation of Hazardous & Other Wastes

The transportation of the Hazardous Wastes has to be undertaken by the transporter who is engaged by either authorised sender or receiver. The responsibility of safe transportation of hazardous & other wastes to the site for pre-processing or co-processing shall rest with either waste generator or the occupier of the pre-processing / co-processing facility that engages the transporter for the waste transportation.

The occupier of the hazardous waste shall ensure that wastes are packed in a manner suitable for safe handling, storage and transport as specified in a manner suitable for safe handling, storage and transport as specified above. Labelling on packaging is readily visible and material used for packaging shall withstand physical conditions and climatic factors as specified above.

In case of transportation of hazardous and other waste, the responsibility of the safe transport shall be either of the sender or receiver whosoever arranges the transport and has the necessary authorization for the transport from the concerned State Pollution Control Board. The authorization for the transport shall be obtained either by sender or the receiver on whose behalf the transport is being arranged. This responsibility should be clearly indicated in the manifest. Thus, the occupier involved in transportation of hazardous waste for pre-processing shall comply with the following requirements:

- (a) Ensure that information regarding characteristics of wastes particularly in terms of being corrosive, reactive, ignitable or toxic is provided on the label.
- (b) The transport of hazardous waste containers shall be in accordance with the provisions of the Hazardous & Other Waste (M & TBM) Rules, 2016 and the Rules made by the Central Government under the Motor Vehicle Act, 1988 and other guidelines issued from time to time.
- (c) Provide the relevant information in Form 9 to the transporter regarding the hazardous nature of the waste and measures to be taken in case of an emergency and shall mark the hazardous waste containers as per Form 8.
- (d) All hazardous waste containers shall be provided with a general label as given in Form 8 of the H & OW (M & TBM) Rules, 2016.
- (e) Intimate both the State Pollution Control Boards before handing over the waste to the transporter. In case of transportation of hazardous waste through a state other than the state of origin and destination, the sender shall give prior intimation to the concerned State Pollution Control Board of the States of transit before handing over the hazardous wastes to the transporter.
- (f) Manifest system shall be applicable for movement of wastes within the country only.

- (g) The sender of the waste shall prepare seven copies of the Manifest in Form 10 comprising of colour code indicated below and all seven copies shall be signed by the sender:

Copy number with colour code	Purpose
Copy-1 (White)	To be forwarded by the sender to the State Pollution Control Board after signing all the seven copies
Copy-2 (Yellow)	To be retained by the sender after taking signature on it from the transporter and the rest of the five signed copies to be carried out by transporter
Copy-3 (Pink)	To be retained by the receiver (actual user or treatment storage and disposal facility operator) after receiving the waste and the remaining four copies are to be duly signed.
Copy-4 (Orange)	To be handed over to the transporter by the receiver after accepting waste.
Copy-5 (Green)	To be sent by the receiver to the State Pollution Control Board.
Copy-6 (Blue)	To be sent by the receiver to the sender.
Copy-7 (Grey)	To be sent by the receiver to the State Pollution Control Board of the sender in case the sender is in another state.

- i) The sender shall forward copy-1 (white) to the state pollution control Board and in case the hazardous waste or other wastes is likely to be transported through any transit State, the sender shall intimate State Pollution Control Boards of transit States about the movement of the waste.
- ii) No transporter shall accept waste from the sender for transport unless it is accompanied by signed copies 3 to 7 of the manifest.
- iii) The transporter shall submit copies 3 to 7 of the manifest duly signed with date to the receiver along with the waste consignment.
- iv) The receiver after acceptance of the waste shall hand over copy-4 (orange) to the transporter and send copy -5 (green) to his State Pollution Control Board and send copy-6 (blue) to the sender and the copy-3 (pink) shall be retained by the receiver.
- v) The copy -7 (grey) shall only be sent to the State Pollution Control Board of the sender, if the sender is in another state.

Requirements pertaining to the transportation of Hazardous Wastes

The transporter engaged for transportation of hazardous wastes for co-processing shall comply with the following conditions:

- i) Vehicle used for transportation shall be in accordance with the provisions under the Motor Vehicle Act, 1988 and rules made there under.
- ii) Transporter shall possess requisite copies of the certificate (valid authorization obtained from concerned SPCB / PCC for transportation of waste by the waste generator and operator of a facility for transportation of hazardous waste.
- iii) Transporter should have valid 'Pollution under Control (PUC) Certificate during the transportation of hazardous waste and shall be properly displayed.

- iv) Vehicle shall be painted preferably in blue colour with white strip of 15 to 30 cm width running centrally all over the body. This is to facilitate easy identification.
- v) Vehicle should be fitted with mechanical handling equipment as may be required for safe handling and transportation of the wastes.
- vi) The words 'HAZARDOUS WASTE' shall be displayed on all sides of the vehicle in vernacular language, Hindi and English.
- vii) Name of the facility operator or the transporter, as the case may be, shall be displayed.
- viii) Emergency phone numbers and TREM card in Form 9 of H & OW (M 7 TBM) Rules, 2016. Vehicle shall be fitted with roll-on / roll-off covers if the individual containers do not possess the same.
- ix) Carrying of passengers is strictly prohibited and those associated with the waste haulers shall be permitted only in the cabin.
- x) Transporter shall carry documents of manifest for the wastes during transportation as required under Rule 9 of the H & OW (M 7 TBM) Rules, 2016.
- xi) The trucks shall be dedicated for transportation of hazardous wastes and they shall not be used for any other purpose.
- xii) Each vehicle shall carry first-aid kit, spill control equipment and fire extinguisher. Hazardous waste transport vehicle shall run only at a speed specified under Motor Vehicle Act in order to avoid any eventuality during the transportation of hazardous waste.
- xiii) Educational qualification of the driver shall be minimum 10th pass (SSC). The driver of the transport vehicle shall have valid driving license of heavy vehicles from the State Road Transport Authority and shall have experience in transporting the chemicals.
- xiv) Driver(s) shall be properly trained for handling the emergency situations and safety aspects involved in the transportation of hazardous wastes.
- xv) Driver should be aware of procedures outlined in emergency response plan and trained on emergency control procedures.
- xvi) The design of the trucks shall be such that there is no spillage during the transportation.

Responsibilities of the Hazardous Waste Transporter

The sender or receiver whoever is involved in transportation of hazardous waste shall be responsible for:

- i) Obtaining requisite authorization from SPCB / PCC for transport of hazardous waste (in addition to any other permission that may be required under the Motor Vehicle (Amendment) Act of 1981.
- ii) The transport vehicle shall be designed suitably to handle and transport the hazardous waste of various characteristics.
- iii) The transporting should follow all the rules pertaining to transportation of hazardous waste as stipulated in H & OW (M 7 TBM) Rules, 2016.
- iv) Transporting of hazardous waste shall be carried out in close containers only at all the time.
- v) The transported hazardous waste shall be delivered in closed containers at all times.
- vi) Informing SPCB / PCC in Form-11 of the H & OW (M 7 TBM) Rules, 2016, or local authority, occupier / operator of the facility and others concerned immediately in case of spillage, leakage or other accidents during transportation.

- vii) The transporter shall train the driver with regard to the emergency response measures to be taken during transportation of waste.
- viii) Cleaning of vehicles shall be carried out at designated places as authorized by SPCB / PCC.
- ix) Clean-up in case of contamination: Liable for taking up immediate emergency response measures in the event of spillage, improper disposal, fire or mishandling of hazardous waste. The main objective of the emergency response measures is to secure immediate human and environmental safety and contain / control further spillage or release of hazardous waste or release of fumes / gases. Each occupier, transporter, operator or cement plant responsible for transportation of hazardous waste shall develop emergency response plan (ERP) as stipulated in the 'Guidelines on Implementing Liabilities for Environmental Damages due to Handling & Disposal of Hazardous Waste and Penalty' published by CPCB.

Storage of Hazardous & Other Wastes

The storage period of hazardous & other wastes shall be in accordance with the Rule 8 of the H & OW (M 7 TBM) Rules, 2016. The minimum requirements for ensuring safe storage of hazardous and other wastes as TSDFs / cement plants / standalone pre-processing facilities shall be as below:

Storage Sheds:

- i) Flammable, ignitable, reactive and non-compatible wastes shall be stored separately and never should be stored in the same storage shed.
- ii) Storage area may consist of different sheds for storing different kinds of hazardous waste and these sheds should be provided with suitable openings.
- iii) Adequate storage capacity (i. e. 25 % of the annual capacity of the hazardous waste utilization as a supplementary resource or for energy recovery, or after processing) shall be provided in the premises.
- iv) Storage area should be designed to withstand the load of material stocked and any damage from the material spillage.
- v) Storage area should be provided with the flameproof electrical fittings and it should be strictly adhered to.
- vi) Automatic smoke, heat detection system shall be provided in the sheds. Adequate fire fighting systems shall be provided for the storage area, along with the areas in the facility.
- vii) There should be at least 15 meter distance between the storage sheds.
- viii) Loading and unloading of wastes in storage sheds should only be done under the supervision of the well trained and experienced staff.
- ix) Fire break of at least 4 meter between two blocks of stacked drums shall be provided in the storage shed. One block of drums shall not exceed 300 MT of waste.
- x) Minimum 1 meter clear space shall be left between two adjacent rows of pallets in pair for inspection.
- xi) The storage and handling should have at least two routes to escape in the event of any fire in the area.
- xii) Doors and approaches of the storage area should be of suitable sizes for entry of fork lift and fire fighting equipment.
- xiii) The exhaust of the vehicles used for the purpose of handling, lifting and transportation within the facility such as forklifts or trucks should be fitted with the approved type of spark arrester.

- xiv) In order to have appropriate measures to prevent percolation of spills, leaks etc. to the soil and ground water, the storage area should be provided with concrete floor or steel sheet depending on the characteristics of waste to be handled and the floor must be structurally sound and chemically compatible with wastes.
- xv) Measures should be taken to prevent entry of runoff into the storage area. The storage area shall be designed in such a way that the floor level is at least 150 mm above the maximum flood level.
- xvi) The storage area floor shall be provided with secondary containment such as proper slopes as well as collection pit so as to collect wash water and the leakages / spills etc.
- xvii) All the storage yards should be provided with proper peripheral drainage system connected with the sump so as to collect any accidental spills in roads or within the storage yards as well as accidental flow due to fire fighting.

Storage in Drums / Containers

- i) The container shall be made or lined with the suitable material, which will not react with, or in other words compatible with the hazardous wastes proposed to be stored.
- ii) The stacking of drums in the storage area should be restricted to three meters high on pallets (wooden frames). Necessary precautionary measures should be taken so as to avoid stack collapse. However, for waste having flash point less than 65.5 °C, the drums should not be stacked more than one height.
- iii) Stacking of drums may be done on specially rakes designed for holding pallets up to three rows, with height not exceeding 4.5 meters
- iv) No drums should be opened in the storage sheds for sampling etc. and such activity should be done in designated places outside the storage areas.
- v) Drums containing wastes stored in the storage area should be labelled properly indicating mainly type, quantity, characteristics, source and date of storing etc.

Measures for Spillage / Leakage Control

- i) The storage areas should be inspected daily for detecting any signs of leaks or deterioration, if any. Leaking or deteriorated containers should be removed and ensured that such contents are transferred to a sound container.
- ii) In case of spills or leaks, dry adsorbents / cotton should be used for cleaning instead of water.
- iii) Proper slope with collection pits be provided in the storage area so as to collect the spills / leakages.
- iv) Storage areas should be provided with adequate number of spill kits at suitable locations. The spill kits should be provided with compatible sorbent material in adequate quantity.

Record Keeping and Maintenance

Proper records with regard to the industry-wise type of waste received, characteristics as well as the location of the wastes that have been stored in the facility need to be maintained.

Storage Time

Normal storage of incinerable hazardous waste at Standalone Pre-processing facilities should be restricted to maximum of 3 months.