

**BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL,
PRINCIPAL BENCH, NEW DELHI**

**ORIGINAL APPLICATION No. 623 of 2024
With
ORIGINAL APPLICATION No. 749 of 2024
With
ORIGINAL APPLICATION No. 750 of 2024**

IN THE MATTER OF:

Shri Ajay Kumar Singh

... Applicant

VERSUS

SEIAA, Uttar Pradesh & Ors.

... Respondents

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FILED BY



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NEW DELHI

DATED: 08 .01.2025

BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL
PRINCIPAL BENCH, NEW DELHI

IN

ORIGINAL APPLICATION No. 623 of 2024

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IN THE MATTER OF:

SHRI AJAY KUMAR SINGH

...APPLICANT

VERSUS

SEIAA, UTTAR PRADESH &Ors

...RESPONDENT(s)

COUNTER AFFIDAVIT ON BEHALF OF RESPONDENT NO. 12
MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE
(MoEF&CC)

MOST RESPECTFULLY SHOWETH:

I, Dr S. Prabhu, working as Scientist-D in the Ministry of Environment, Forest and Climate Change (MoEF&CC) having office at Indira Paryavaran Bhavan, Jor Bagh Road, New Delhi-110003, the deponent herein do hereby solemnly affirm and state on oath as under:

S.P.



1. That I am competent to swear the present counter affidavit on behalf of MoEF&CC and I am aware of the facts and circumstances of the case based on record.
2. That, I have perused the contents of the above captioned application filed by the applicant and I am duly authorized to depose by way of the present affidavit.
3. That, the Answering Respondent is not replying to the present application in para-wise manner and craves leave to file a detailed affidavit as and when necessary and required by this Hon'ble Tribunal.
4. That the instant application has been filed against the Environmental Clearance's dated 01.07.2023, 22.11.2023 and 10.11.2023 granted by SEIAA, Uttar Pradesh to Respondent No.4 (M/s AV Bio Medical Waste), Respondent No.-3 (M/s VRBA Bio Waste Solutions Pvt. Ltd.) and Respondent No.2 (M/s R.S.Bio Medical Waste Services) respectively. It is alleged that the aforesaid ECs and Consent to Establish was granted to the aforesaid project proponents, in violation of the CPCB guidelines as well as the Bio-Medical Waste Rule, 2016.
5. That, Instant application filed on the following **Grounds** :



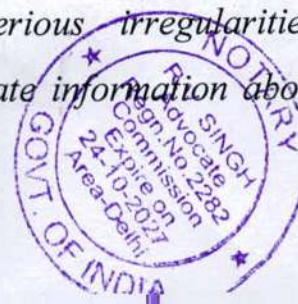
a. *Because the Respondents, i.e. SEAC-2, SEIAA, Uttar Pradesh (UP) and UPPCB, have miserably failed to fulfil the responsibility of environmental protection vested in it by the*

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Environment Protection Act, 1986 and the Environment Impact Assessment Notification, 2006.

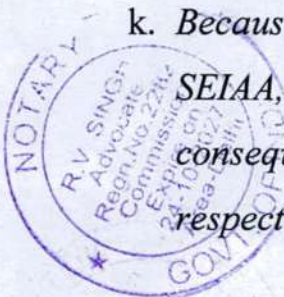
- b. *Because the SEAC-2, SEIAA, U.P. and UPPCB, violates the guidelines outlined in the Operating Manual of the UPSIDC. This violation relates to Guideline No. 2.05 of the UPSIDC Operating Manual, which explicitly states that applications for plot or shed allocation may be turned down by the Regional Manager or Area Manager if the proposed project is classified as hazardous by the Uttar Pradesh Pollution Control Board.*
- c. *Because the SEAC-2, SEIAA, U.P. and UPPCB erred to note down that the CBWTF facilities were categorized under the RED category by the UPPCB, and hence, EC and CTE Certificates violates the rules of the UPSIDC as mentioned above.*
- d. *Because the SEAC-2, SEIAA, U.P. and UPPCB, didn't grasp the risks posed by the hazardous nature of the CBWTFs, which jeopardizes the safety of thousands of workers in these industrial areas. Additionally, the proximity of CBWTFs to established food industries in the industrial areas could result in the improper disposal of biomedical waste, posing a threat to public health and the environment.*
- e. *Because the Plot allotted to the Respondent No. 2 by SIDA for establishing a CBWTF may contravene all the mentioned terms and conditions. Consequently, the allocation letter blatantly violates the law, rendering it illegal, void-ab-initio, and contrary to UPSIDC rules.*
- f. *Because the SEAC-2 and SEIAA, U.P. have provided EC to the said projects without appreciating the fact that the EIA Reports of the said projects are suffering from serious irregularities, loopholes, errors and based on the inaccurate information about*

S.P. —



the gap analysis report filed by the UPPCB through letter dated 30.08.2023, 01.07.2023 and 26.04.2023 in respect of the Respondent No. 2, 3 and 4 respectively.

- g. Because the SEAC-2 and SEIAA, U.P. failed to understand that the existing CBWTFs in respect of the Respondent No.2, 3 and 4 are more than sufficient to handle the bio-medical waste from the Public and Private Health Care Facilities in their respective areas.
- h. Because the SEAC-2, SEIAA, U.P. and UPPCB did not realize that the proposed facility is likely to impact only the environment and the health hygiene of approximately five thousand workers in the respective industrial areas, as the other CBWTF facilities in the area are currently underutilized.
- i. Because the SEAC-2, SEIAA, U.P. and UPPCB, broke the rules outlined in CPCB, 2016 and the Biomedical Waste Management Rules of 2016 when they granted EC and CTE Certificates to the Respondent No. 2, 3 and 4. This action goes against the criteria for establishing a new CBWTF within a locality or region, as outlined in para 2 of the Revised Guidelines.
- j. Because the SEAC-2, SEIAA, U.P. and UPPCB, ignored the concerns raised by the Chief Medical Officer, Jaunpur, vide letter dated 14.07.2021. In the letter, it was clearly stated that there's no need for a new CBWTF in Jaunpur, Uttar Pradesh, as the existing facility there is enough for both government and private healthcare unit.
- k. Because the callousness and negligence displayed by the SEAC-2, SEIAA, U.P. and UPPCB will lead to serious environmental consequences for the state and the workers working in their respective Industrial Areas.

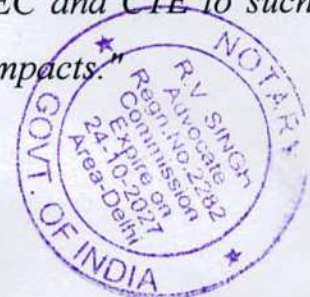


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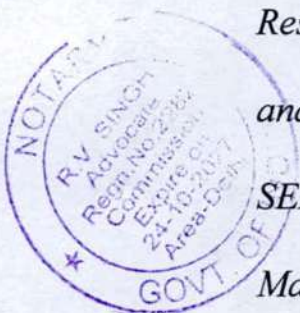
- l. *Because the callous attitude of SEAC-2, SEIAA, U.P. and UPPCB casts a serious doubt on the impartiality and unbiased nature of these bodies.*
- m. *Because it is apparent that the SEAC-2, SEIAA, U.P. and UPPCB have vested interest in giving EC and CTE to these aforementioned projects.*
- n. *Because the SEAC-2, SEIAA, U.P. and UPPCB, did not follow the fundamental legal principle that when a statute prescribes a specific method or requirement, that method must be followed, or the action must not be taken at all.*
- o. *Because environmental governance requires decision makers to bear in mind the principles of sustainable development. The principles of sustainable development require a balance to be drawn between the need for development on the one hand and the protection of the environment on the other.*
- p. *Because by displaying such partisan behaviour the SEAC-2, SEIAA and UPPCB are not only adversely affecting the environment but are also seriously prejudicing the future of people of Uttar Pradesh.*
- q. *Because the legal right of the Applicant as an environmental consultant as well as an active resident of the State of Uttar Pradesh is prejudiced by the acts of SEIAA, SEAC-2 and UPPCB.*
- r. *Because if this Hon'ble Tribunal does not intervene then the rights and interests of the people of Uttar Pradesh will be seriously prejudiced.*
- s. *Because if the relief as prayed for by the Applicant is not granted then the Respondents will continue to grant EC and CTE to such projects without weighing the environmental impacts.*

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6. That the instant application filed on the following **Prayer**:

- a. *direct the Respondent No.5, to form a high Level Committee to investigate in the issuance of the illegal Environmental Clearance Certificates granted to the Respondents No.2, 3 and 4 also take appropriate action against the erring officials for any illegalities or irregularities in granting the above-mentioned ECs;*
- b. *direct the Respondent No. 1, 7, 8, 11 and 12 to cancel all the ECs of the facilities built up in the state of U.P. and submit the report in compliance of the same before this Hon'ble Tribunal;*
- c. *direct the respondents to compensate and restitution for the environmental damage/degradation against human life as well as flora and fauna of the surrounding areas caused by the ongoing construction activities;*
- d. *quash and set aside the Consent to Establish/Environmental Clearance dated 10.11.2023 to Respondent No. 2, EC dated 22.11.2023 to Respondent No. 3 and EC dated 01.07.2023 to Respondent No. 4, granted by the SEIAA, U.P., for the proposed Common Bio-medical Waste Management Treatment Facilities at Plot No. C-20, Sathariya Industrial Development Authority (Jaunpur), E-46, Phase-1, Khasra No.- 148/5, Sindhitali, Phase-2, Ramnagar*



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*Industrial Area and Plot No. A-2/36, Sector 15, Gorakhpur
Industrial Development Authority (Gorakhpur) respectively.*

Rule Regulation as per EIA Notification, 2006 :

7. That the answering respondent issued an Environmental Impact Assessment Notification vide S.O. 1533(E) dated 14.09.2006 superseding the Environmental Impact Assessment (EIA) Notification, 1994 under the Environment (Protection) Act, 1986. The EIA Notification, 2006 regulates developmental projects in respect of construction of new projects/activities/ expansion or modernization of existing projects in different parts of the country under sub section (3) of section 3 of the said Act, in accordance with the procedure specified in the notification under the provisions of the EIA Notification, 2006. **Copy of the EIA Notification, 2006 is placed at Annexure-R/1.**
8. That EIA Notification, 2006 covers 38 projects/activities in its Schedule which *inter alia* include different types of infrastructure projects viz. Airports, Ports, Highways, and Building & Construction Projects etc. as specified and classified in the schedule of the said notification. All such projects/activities shall require prior environmental clearance from the concerned regulatory authority, e.g., MoEF&CC in the Central Government for matters falling under Category 'A' in the Schedule and the State Environment Impact Assessment Authority (SEIAA) at State

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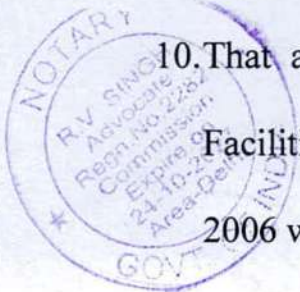
level for matters falling under Category 'B' in the said Schedule, before starting any construction work, or preparation of land by the project management except for securing the land. Broadly following categories projects/activities are covered under the ambit of EIA Notification, 2006:

- I. *All new projects or activities listed in the Schedule to the said notification;*
- II. *Expansion and modernization of existing projects or activities listed in the Schedule to the notification with addition of capacity beyond the threshold limits given in the Schedule, after expansion or modernization; and*
- III. *Any change in product - mix in an existing manufacturing unit included in Schedule beyond the specified range.*

9. That the answering respondent has issued a Notification vide S.O.1142 (E) dated 17.04.2015 and made amendment to the notification dated S.O.1533 (E) dated 14.09.2006 by inserting the item and entries 7(da) in the schedule of the said notification for the Bio-medical Waste Treatment Facilities. Therefore, any expansion of existing Bio-Medical Waste Plant after 2015 or setting up of new Bio-Medical Waste Plant would require EC. **Copy of Notification dated 17.04.2015 is placed as Annexure-R/2.**

10. That as per the extant provisions, the Bio-Medical Waste Treatment Facilities are covered under 7(da) of the Schedule to the EIA Notification, 2006 with details as under:

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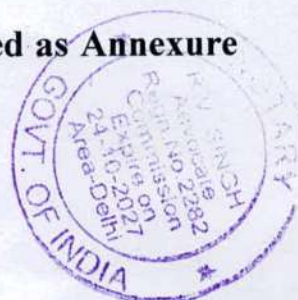
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(1)	Project or Activity (2)	Category with threshold limit		Conditions if any (5)
		A (3)	B (4)	
7		Physical Infrastructure including Environmental Services		
7(da)	Bio-Medical Waste treatment Facilities	-	All projects	-

That the Bio-medical Waste Treatment Facilities fall under category 'B' of the EIA Notification, 2006 and require EC. Such projects are required to be appraised by the State Level Expert Appraisal Committees (SEACs) and approved by the State Level Environment Impact Assessment Authorities (SEIAAs). Further, that as per the EIA Notification, 2006, in the absence of a duly constituted SEIAA/SEAC, category 'B' projects shall be considered at the Central Level as category 'B' projects.

11. That this answering respondent, vide Notification No. S. O. 637(E) dated 28.02.2014, has authorized the SEIAAs, which have been constituted by the Central Government under sub-section (3) of section 3 of the Environment (Protection) Act, 1986 and delegated the powers under the Section 19 of the said Act to take necessary action against the violations, if any. **Copy of Notification dated 28.02.2014 is annexed as Annexure - R/3.**

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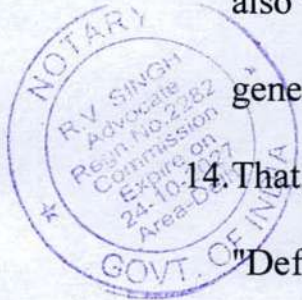


**Rule position w.r.t the BIO-MEDICAL WASTE MANAGEMENT
RULES, 2016:**

12. It is submitted that the Ministry vide Gazette Notification No. G.S.R 343(E) dated 28.03.2016 had notified the Bio-Medical Waste Management Rules, 2016 in supersession of earlier Rules namely the Bio-Medical Waste (Management & Handling) Rules, 1998 with the objectives to improve segregation, collection, processing, treatment, and disposal of bio-medical waste in an environmentally sound manner, thereby reducing its impact on the environment. The Ministry has also issued three amendments in the BMWM Rules, 2016 vide GSR No. 234(E) dated 16.03.2018; GSR No.129 (E) dated 19.02.2019, and, 360(E) dated 10.05.2019. **Copies of the principal BMWM Rules, 2016, and amendments are annexed herein as Annexure- R/4, R/5, R/6 & R/7 respectively.**

13. That, the new Biomedical Waste Management (BMWM) Rules, 2016 are also uniformly applicable to all persons and institutions involved in the generation and handling of biomedical waste in the country.

14. That, Rule 3 of the Bio-Medical Waste Management Rules, 2016 titled "Definitions" defines "prescribed authority" as the State Pollution Control Board in respect of a State and Pollution Control Committees in respect of a Union territory;"



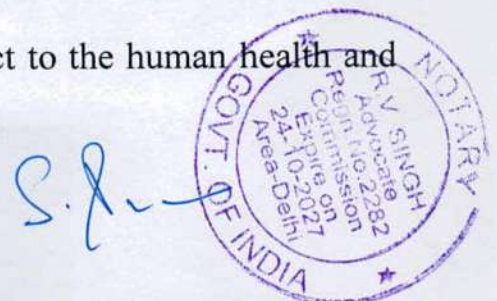
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- d. immunise all its health care workers and others, involved in handling of bio-medical waste for protection against diseases including Hepatitis B and Tetanus that are likely to be transmitted by handling of bio-medical waste, in the manner as prescribed in the National Immunisation Policy or the guidelines of the Ministry of Health and Family Welfare issued from time to time;
- m. conduct health check up at the time of induction and at least once in a year for all its health care workers and others involved in handling of bio- medical waste and maintain the records for the same;
- n. maintain and update on day-to-day basis the bio-medical waste management register and display the monthly record on its website according to the bio-medical waste generated in terms of category and color coding as specified in Schedule I;

15. That, Rule 5 of the Bio-Medical Waste Management Rules, 2016 titled "Duties of the operator of a common bio-medical waste treatment and disposal facility", mentions that "It shall be duty of every operator to:

- (a) take all necessary steps to ensure that the bio-medical waste collected from the occupier is transported, handled, stored, treated and disposed of, without any adverse effect to the human health and



16. That, Rule 4 of the Bio-Medical Waste Management Rules, 2016 titled "Duties of the occupier", mentions that "It shall be duty of every occupier to:

- a. take all necessary steps to ensure that bio-medical waste is handled without any adverse effect to human health and the environment and in accordance with these rules;
- b. make a provision within the premises for a safe, ventilated and secured location for storage of segregated biomedical waste in colored bags or containers in the manner as specified in Schedule I, to ensure that there shall be no secondary handling, pilferage of recyclables or inadvertent scattering or spillage by animals and the bio-medical waste from such place or premises shall be directly transported in the manner as prescribed in these rules to the common bio-medical waste treatment facility or for the appropriate treatment and disposal, as the case may be, in the manner as prescribed in Schedule I;
- c. provide training to all its health care workers and others, involved in handling of bio medical waste at the time of induction and thereafter at least once every year and the details of training programmes conducted, number of personnel trained and number of personnel not undergone any training shall be provided in the Annual Report;



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- (h) ensure occupational safety of all its workers involved in handling of bio-medical waste by providing appropriate and adequate personal protective equipment;
- (i) report major accidents including accidents caused by fire hazards, blasts during handling of bio-medical waste and the remedial action taken and the records relevant thereto, (including nil report) in Form I to the prescribed authority and also along with the annual report;
- (j) maintain a log book for each of its treatment equipment according to weight of batch; categories of waste treated; time, date and duration of treatment cycle and total hours of operation;
- (k) allow occupier, who are giving waste for treatment to the operator, to see whether the treatment is carried out as per the rules;
- (l) shall display details of authorisation, treatment, annual report etc on its web-site;
- (m) after ensuring treatment by autoclaving or microwaving followed by mutilation or shredding, whichever is applicable, the recyclables from the treated bio-medical wastes such as plastics and glass, shall be given to recyclers having valid consent or authorisation or registration from the respective State Pollution Control Board or Pollution Control Committee;
- (n) supply non-chlorinated plastic-coloured bags to the occupier on chargeable basis, if required;



S. J. —

the environment, in accordance with these rules and guidelines issued by the Central Government or, as the case may be, the central pollution control board from time to time;

(b) ensure timely collection of bio-medical waste from the occupier as prescribed under these rules;

(c) establish bar coding and global positioning system for handling of bio- medical waste in accordance with the guidelines issued by the Central Pollution Control Board by 27th march 2019;

(d) inform the prescribed authority immediately regarding the occupiers which are not handing over the segregated bio medical waste in accordance with these rules;

(e) provide training for all its workers involved in handling of bio-medical waste at the time of induction and at least once a year thereafter;

(f) assist the occupier in training conducted by them for bio-medical waste management;

(g) undertake appropriate medical examination at the time of induction and at least once in a year and immunise all its workers involved in handling of bio-medical waste for protection against diseases, including Hepatitis B and Tetanus, that are likely to be transmitted while handling bio medical waste and maintain the records for the same;



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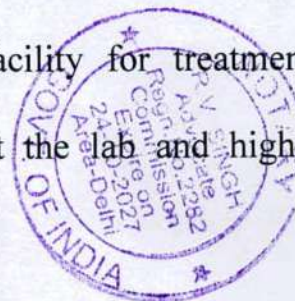
- (o) common bio-medical waste treatment facility shall ensure collection of biomedical waste on holidays also;
- (p) maintain all record for operation of incineration, hydroor autoclaving for a period of five years; and
- (q) upgrade existing incinerators to achieve the standards for retention time in secondary chamber and Dioxin and Furans within two years from the date of this notification.

17. That, Rule 6 of the Bio-Medical Waste Management Rules, 2016 titled "Duties of Authorities" mentions that- The authority specified in column (2) of Scheduled-III shall perform the duties as specified in column (3) thereof in accordance with provisions of these rules.

18. That, Rule 7 of the Bio-Medical Waste Management Rules, 2016 titled "Treatment and Disposal" mentions that "

(1) Bio-medical waste shall be treated and disposed of in accordance with Schedule I, and in compliance with the standards provided in Schedule-II by the health care facilities and common bio-medical waste treatment facility.

(2) Occupier shall hand over segregated waste as per the Schedule-I to common bio-medical waste treatment facility for treatment, processing and final disposal. Provided that the lab and highly



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infectious bio-medical waste generated shall be pre-treated by equipment like autoclave or microwave.

(3) No occupier shall establish on-site treatment and disposal facility, if a service of common bio-medical waste treatment facility is available at a distance of seventy-five kilometre.

(4) In cases where service of the common bio-medical waste treatment facility is not available, the Occupiers shall set up requisite biomedical waste treatment equipment like incinerator, autoclave or microwave, shredder prior to commencement of its operation, as per the authorisation given by the prescribed authority.

(5) Every operator of common bio-medical waste treatment facility shall set up requisite biomedical waste treatment equipments like incinerator, autoclave or microwave, shredder and effluent treatment plant as a part of treatment, prior to commencement of its operation.

19. That Rule 9 of the Bio-Medical Waste Management Rules, 2016 titled "Prescribed authority" mentions that "The prescribed authority for the implementation of the provisions of these rules shall be the State Pollution Control Boards in respect of States and Pollution Control Committees in respect of Union territories" and that the prescribed



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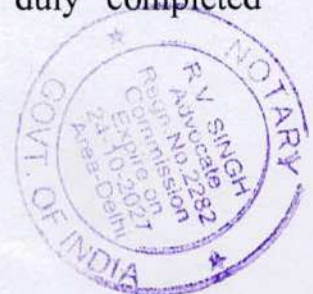
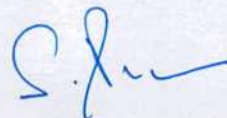
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authorities shall comply with the responsibilities as stipulated in Schedule III of BMWM Rules 2016.

20. It is submitted that the Rule 10 of the Bio-Medical Waste Management Rules, 2016 titled "Procedure for authorisation" mentions that:

"Every occupier or operator handling bio-medical waste, irrespective of the quantity shall make an application in Form II to the prescribed authority i.e. State Pollution Control Board and Pollution Control Committee, as the case may be, for grant of authorisation and the prescribed authority shall grant the provisional authorisation in Form III and the validity of such authorisation for bedded health care facility and operator of a common facility shall be synchronised with the validity of the consents.

(1) The authorisation shall be one time for non-bedded occupiers and the authorisation in such cases shall be deemed to have been granted, if not objected by the prescribed authority within a period of ninety days from the date of receipt of duly completed application along with such necessary documents.



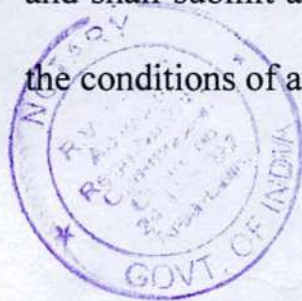
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(2) In case of refusal of renewal, cancellation or suspension of the authorisation by the prescribed authority, the reasons shall be recorded in writing:

Provided that the prescribed authority shall give an opportunity of being heard to the applicant before such refusal of the authorisation.

(3) Every application for authorisation shall be disposed of by the prescribed authority within a period of ninety days from the date of receipt of duly completed application along with such necessary documents, failing which it shall be deemed that the authorisation is granted under these rules.

(4) In case of any change in the bio-medical waste generation, handling, treatment and disposal for which authorisation was earlier granted, the occupier or operator shall intimate to the prescribed authority about the change or variation in the activity and shall submit a fresh application in Form II for modification of the conditions of authorisation.



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21. That Rule 14 of the Bio-Medical Waste Management Rules, 2016 titled as "Maintenance of records" mentions that (1) Every authorised person shall maintain records related to the generation, collection, reception, storage, transportation, treatment, disposal or any other form of handling of bio-medical waste, for a period of five years, in accordance with these rules and guidelines issued by the Central Government or the Central Pollution Control Board or the prescribed authority as the case may be. (2) All records shall be subject to inspection and verification by the prescribed authority or the Ministry of Environment, Forest and Climate Change at any time.
22. It is submitted that the CPCB has issued guidelines for the implementation of BMWM Rules, 2016, and the establishment and operation of Common Bio-medical Treatment and Disposal Facilities.
23. It is submitted that the CPCB has also issued guidelines for the implementation of BMWM Rules, 2016, and the establishment and operation of Common Bio-medical Treatment and Disposal Facilities.
24. It is submitted that the several representations from Uttar Pradesh were received regarding violation of BMW rules while giving clearance to new CBWTFs. In view of the critical nature of the Bio Medical waste and to ensure feasibility of CBWTFs, it is important that these rules and guidelines need to be followed in letter and spirit by all concerned authorities.

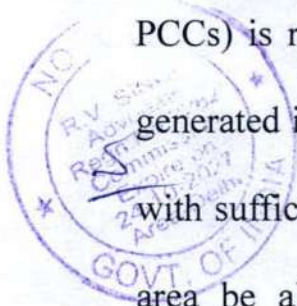
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25. It is submitted that the Answering Respondent (MoEF&CC) had issued D.O. letters dated 14.10.2022 & 18.10.2022 to the Chairman of UPPCB; SEIAA, Uttar Pradesh, and Principal Secy., Government of Uttar Pradesh to intervene and ensure gap analysis studies & compliance to BMW Rules 2016/ CPCB guidelines, these provisions must become one of the fundamental grounds of granting ECs/ Consent/ Authorization to HCFs/ CBWTFs. Also, ensure effective monitoring of CBWTFs within their jurisdiction and come under the ambit of the Online Continuous Emission Monitoring System and connect with the CPCB server. In case of insufficient BMW treatment capacity, proper gap analysis be undertaken, and new facilities may be allowed. Further, non-compliant entities be penalized and asked to deposit requisite environmental compensation.

Copy of the D.O. Letter's dated 14.10.2022 & 18.10.2022 is annexed as Annexure-R/8.

26. It is submitted that the CPCB guidelines mention that the concerned State Pollution Control Board/ Pollution Control Committee (SPCBs/ PCCs) is required to carry out a gap analysis of the quantity of BMW generated in any coverage area vis-à-vis the treatment capacity available, with sufficient projections, based on which a new common facility in an area be allowed. **Copy of Revised guidelines dated 21.12.2016 is annexed as Annexure-R/9.**



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27. It is submitted that the SPCBs and the State Health Departments are the nodal agencies to ensure the enforcement and implementation of BMWM Rules 2016, which include segregation, collection, transportation, and scientific disposal of waste.

28. That the present counter affidavit may kindly be taken on record and into consideration and the Hon'ble Tribunal may pass appropriate order(s), direction(s) as deemed fit and proper under the facts and circumstances of the present case.

29. That other/ancillary issues raised in the application under reply do not pertain to the answering respondent. The Answering Respondent seeks leave to make additional submissions, if required, during the course of the proceedings.

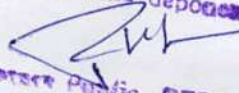


VERIFICATION


 DEPONENT
 (डॉ. एस. प्रभु)
 (Dr. S. PRABHU)
 वैज्ञानिक 'डी' / Scientist 'D'
 पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय
 Min. of Environment, Forest and Climate Change
 भारत सरकार, नई दिल्ली
 Govt. of India, New Delhi

Verified at _____ on 7 JAN 2025 this day of _____, 2025 that the contents of the above affidavit are correct to my knowledge and belief based on official records and nothing material has been concealed therefrom.

solely affirmed before me, read over & explained to the deponent.


 Notary Public, DELHI

7 JAN 2025


 DEPONENT

(डॉ. एस. प्रभु)
 (Dr. S. PRABHU)
 वैज्ञानिक 'डी' / Scientist 'D'
 पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय
 Min. of Environment, Forest and Climate Change
 भारत सरकार, नई दिल्ली
 Govt. of India, New Delhi

I Identified the deponent/affidavit who has signed in my presence

(Published in the Gazette of India, Extraordinary, Part-II, and Section 3, Sub-section (ii)
MINISTRY OF ENVIRONMENT AND FORESTS
 New Delhi 14th September, 2006

Notification

S.O. 1533(E). - Whereas, a draft notification **under sub-rule (3) of Rule 5 of the Environment (Protection) Rules, 1986 for imposing** certain restrictions and prohibitions on new projects or activities, or on the expansion or modernization of existing projects or activities based on their potential environmental impacts as indicated in the Schedule to the notification, being undertaken in any part of India¹, unless prior environmental clearance has been accorded in accordance with the objectives of National Environment Policy **as approved by the Union Cabinet on 18th May, 2006** and the procedure specified in the notification, by the Central Government or the State or Union territory Level Environment Impact Assessment Authority (SEIAA), to be constituted by the Central Government in consultation with the State Government or the Union territory Administration concerned under sub-section (3) of section 3 of the Environment (Protection) Act, 1986 for the purpose of this notification, was published in the Gazette of India, Extraordinary, Part II, section 3, sub-section (ii) vide number S.O. 1324 (E) dated the 15th September, 2005 inviting objections and suggestions from all persons likely to be affected thereby within a period of sixty days from the date on which copies of Gazette containing the said notification were made available to the public;

And whereas, copies of the said notification were made available to the public on 15th September, 2005;

And whereas, all objections and suggestions received in response to the above mentioned draft notification have been duly considered by the Central Government;

Now, therefore, in exercise of the powers conferred by sub-section (1) and clause (v) of sub-section (2) of section 3 of the Environment (Protection) Act, 1986, read with clause (d) of sub-rule (3) of rule 5 of the Environment (Protection) Rules, 1986 and in supersession of the notification number S.O. 60 (E) dated the 27th January, 1994, except in respect of things done or omitted to be done before such supersession, the Central Government hereby directs that on and from the date of its publication the required construction of new projects or activities or the expansion or modernization of existing projects or activities listed in the Schedule to this notification entailing capacity addition with change in process and or technology shall be

I; II; III (i), (ii); IV (a), (b); V (i), (ii), (iii)(a), (b), (c), (iv), (v), (vi) (a), (b), (vii), (viii) (a), (b), (ix), (x), (xi), (xii) (a), (b), (xiii), (xiv) (a), (b), (xv) (a), (b), (xvi) (a), (b), (xvii); VI (a), (b); VII & VIII of the Notification, S.O. 3067(E) dated 01.12.2009 of the Ministry of Environment and Forests, (Published in the Gazette of India, Extraordinary, Part-II, and Section 3, Sub-section (ii), No. 2002] New Delhi, Tuesday, November 1, 2009; an amendment to EC notification S.O.1533(E) dated 14.09.2006

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undertaken in any part of India only after the prior environmental clearance from the Central Government or as the case may be, by the State Level Environment Impact Assessment Authority, duly constituted by the Central Government under sub-section (3) of section 3 of the said Act, in accordance with the procedure specified hereinafter in this notification.

¹Includes the territorial waters

2. Requirements of prior Environmental Clearance (EC):- The following projects or activities shall require prior environmental clearance from the concerned regulatory authority, which shall hereinafter referred to be as the Central Government in the Ministry of Environment and Forests for matters falling under Category 'A' in the Schedule and at State level the State Environment Impact Assessment Authority (SEIAA) for matters falling under Category 'B' in the said Schedule, before any construction work, or preparation of land by the project management except for securing the land, is started on the project or activity:

- (i) All new projects or activities listed in the Schedule to this notification;
- (ii) Expansion and modernization of existing projects or activities listed in the Schedule to this notification with addition of capacity beyond the limits specified for the concerned sector, that is, projects or activities which cross the threshold limits given in the Schedule, after expansion or modernization;
- (iii) Any change in product - mix in an existing manufacturing unit included in Schedule beyond the specified range.

3. State Level Environment Impact Assessment Authority:- (1) A State Level Environment Impact Assessment Authority hereinafter referred to as the SEIAA shall be constituted by the Central Government under sub-section (3) of section 3 of the Environment (Protection) Act, 1986 comprising of three Members including a Chairman and a Member – Secretary to be nominated by the State Government or the Union territory Administration concerned.

- (2) The Member-Secretary shall be a serving officer of the concerned State Government or Union territory administration familiar with environmental laws.
- (3) The other two Members shall be either a professional or expert fulfilling the eligibility criteria given in Appendix VI to this notification.

I; II; III (i), (ii); IV (a), (b); V (i), (ii), (iii)(a), (b), (c), (iv), (v), (vi) (a), (b), (vii), (viii) (a), (b), (ix), (x), (xi), (xii) (a), (b), (xiii), (xiv) (a), (b), (xv) (a), (b), (xvi) (a), (b), (xvii); VI (a), (b); VII & VIII of the Notification, S.O. 3067(E) dated 01.12.2009 of the Ministry of Environment and Forests, (Published in the Gazette of India, Extraordinary, Part-II, and Section 3, Sub-section (ii), No. 2002] New Delhi, Tuesday, November 1, 2009; an amendment to EC notification S.O.1533(E) dated 14.09.2006

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- (4) One of the specified Members in sub-paragraph (3) above who is an expert in the Environmental Impact Assessment process shall be the Chairman of the SEIAA.
- (5) The State Government or Union territory Administration shall forward the names of the Members and the Chairman referred in sub- paragraph 3 to 4 above to the Central Government and the Central Government shall constitute the SEIAA as an authority for the purposes of this notification within thirty days of the date of receipt of the names.
- (6) The non-official Member and the Chairman shall have a fixed term of three years (from the date of the publication of the notification by the Central Government constituting the authority).
- ¹“(7) All decisions of the SEIAA shall be taken in a meeting and shall ordinarily be unanimous:
Provided that, in case a decision is taken by majority, the details of views, for and against it, shall be clearly recorded in the minutes and copy thereof sent to MoEF.”

4. Categorization of projects and activities:-

- (i) All projects and activities are broadly categorized in to two categories - Category A and Category B, based on the spatial extent of potential impacts and potential impacts on human health and natural and man made resources.
- (ii) All projects or activities included as Category 'A' in the Schedule, including expansion and modernization of existing projects or activities and change in product mix, shall require prior environmental clearance from the Central Government in the Ministry of Environment and Forests (MoEF) on the recommendations of an Expert Appraisal Committee (EAC) to be constituted by the Central Government for the purposes of this notification;
- (iii) All projects or activities included as Category 'B' in the Schedule, including expansion and modernization of existing projects or activities as specified in sub paragraph (ii) of paragraph 2, or change in product mix as specified in sub paragraph (iii) of paragraph 2, but excluding those which fulfill the General Conditions (GC) stipulated in the Schedule, *will* require prior environmental clearance from the State/Union territory Environment Impact Assessment Authority (SEIAA). The SEIAA shall base its decision on the recommendations of a State or Union territory level Expert Appraisal Committee (SEAC) as to be constituted for in this notification. ^{II} “In the absence of a duly constituted SEIAA

I; II; III (i), (ii); IV (a), (b); V (i), (ii), (iii)(a), (b), (c), (iv), (v), (vi) (a), (b), (vii), (viii) (a), (b), (ix), (x), (xi), (xii) (a), (b), (xiii), (xiv) (a), (b), (xv) (a), (b), (xvi) (a), (b), (xvii); VI (a), (b); VII & VIII of the Notification, S.O. 3067(E) dated 01.12.2009 of the Ministry of Environment and Forests, (Published in the Gazette of India, Extraordinary, Part-II, and Section 3, Sub-section (ii), No. 2002] New Delhi, Tuesday, November 1, 2009; an amendment to EC notification S.O.1533(E) dated 14.09.2006

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or SEAC, a Category 'B' project shall be considered at Central Level as a Category 'B' project;"

5. Screening, Scoping and Appraisal Committees:-

The same Expert Appraisal Committees (EACs) at the Central Government and SEACs (hereinafter referred to as the (EAC) and (SEAC) at the State or the Union territory level shall screen, scope and appraise projects or activities in Category 'A' and Category 'B' respectively. EAC and SEAC's shall meet at least once every month.

- (a) The composition of the EAC shall be as given in Appendix VI. The SEAC at the State or the Union territory level shall be constituted by the Central Government in consultation with the concerned State Government or the Union territory Administration with identical composition;
- (b) The Central Government may, with the prior concurrence of the concerned State Governments or the Union territory Administrations, constitutes one SEAC for more than one State or Union territory for reasons of administrative convenience and cost;
- (c) The EAC and SEAC shall be reconstituted after every three years;
- (d) The authorised members of the EAC and SEAC, concerned, may inspect any site(s) connected with the project or activity in respect of which the prior environmental clearance is sought, for the purposes of screening or scoping or appraisal, with prior notice of at least seven days to the applicant, who shall provide necessary facilities for the inspection;
- (e) The EAC and SEACs shall function on the principle of collective responsibility. The Chairperson shall endeavour to reach a consensus in each case, and if consensus cannot be reached, the view of the majority shall prevail.

6. Application for Prior Environmental Clearance (EC):-

An application seeking prior environmental clearance in all cases shall be made in the prescribed Form 1 annexed herewith and Supplementary Form 1A, if applicable, as given in Appendix II, after the identification of prospective site(s) for the project and/or activities to which the application relates, before commencing any construction activity, or preparation of land, at the site by the applicant. The applicant shall furnish, along with the application, a copy

I; II; III (i), (ii); IV (a), (b); V (i), (ii), (iii)(a), (b), (c), (iv), (v), (vi) (a), (b), (vii), (viii) (a), (b), (ix), (x), (xi), (xii) (a), (b), (xiii), (xiv) (a), (b), (xv) (a), (b), (xvi) (a), (b), (xvii); VI (a), (b); VII & VIII of the Notification, S.O. 3067(E) dated 01.12.2009 of the Ministry of Environment and Forests, (Published in the Gazette of India, Extraordinary, Part-II, and Section 3, Sub-section (ii), No. 2002] New Delhi, Tuesday, November 1, 2009; an amendment to EC notification S.O.1533(E) dated 14.09.2006

of the pre-feasibility project report except that, in case of construction projects or activities (item 8 of the Schedule) in addition to Form 1 and the Supplementary Form 1A, a copy of the conceptual plan shall be provided, instead of the pre-feasibility report.

7. Stages in the Prior Environmental Clearance (EC) Process for New Projects:-

7(i) The environmental clearance process for new projects will comprise of a maximum of four stages, all of which may not apply to particular cases as set forth below in this notification. These four stages in sequential order are:-

- Stage (1) Screening (Only for Category 'B' projects and activities)
- Stage (2) Scoping
- Stage (3) Public Consultation
- Stage (4) Appraisal

I. Stage (1) - Screening:

In case of Category 'B' projects or activities, this stage will entail the scrutiny of an application seeking prior environmental clearance made in Form 1 by the concerned State level Expert Appraisal Committee (SEAC) for determining whether or not the project or activity requires further environmental studies for preparation of an Environmental Impact Assessment (EIA) for its appraisal prior to the grant of environmental clearance depending up on the nature and location specificity of the project . The projects requiring an Environmental Impact Assessment report shall be termed Category 'B1' and remaining projects shall be termed Category 'B2' and will not require an Environment Impact Assessment report. For categorization of projects into B1 or B2 except item 8 (b), the Ministry of Environment and Forests shall issue appropriate guidelines from time to time.

II. Stage (2) - Scoping:

(i) "Scoping": refers to the process by which the Expert Appraisal Committee in the case of Category 'A' projects or activities, and State level Expert Appraisal Committee in the case of Category 'B1' projects or activities, including applications for expansion and/or modernization and/or change in product mix of existing projects or activities, determine detailed and comprehensive Terms Of Reference (TOR) addressing all relevant environmental concerns for the preparation of an Environment Impact Assessment (EIA) Report in respect of the project or activity for which prior environmental clearance is sought. The Expert Appraisal Committee or State level Expert Appraisal Committee

I; II; III (i), (ii); IV (a), (b); V (i), (ii), (iii)(a), (b), (c), (iv), (v), (vi) (a), (b), (vii), (viii) (a), (b), (ix), (x), (xi), (xii) (a), (b) , (xiii), (xiv) (a), (b), (xv) (a), (b), (xvi) (a), (b), (xvii); VI (a), (b); VII & VIII of the Notification, S.O. 3067(E) dated 01.12.2009 of the Ministry of Environment and Forests, (Published in the Gazette of India, Extraordinary, Part-II, and Section 3, Sub-section (ii), No. 2002] New Delhi, Tuesday, November 1, 2009; an amendment to EC notification S.O.1533(E) dated 14.09.2006

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concerned shall determine the Terms of Reference on the basis of the information furnished in the prescribed application Form1/Form 1A including Terms of Reference proposed by the applicant, a site visit by a sub- group of Expert Appraisal Committee or State level Expert Appraisal Committee concerned only if considered necessary by the Expert Appraisal Committee or State Level Expert Appraisal Committee concerned, Terms of Reference suggested by the applicant if furnished and other information that may be available with the Expert Appraisal Committee or State Level Expert Appraisal Committee concerned. All projects and activities listed as Category 'B' in Item 8 of the Schedule (Construction/Township/Commercial Complexes /Housing) shall not require Scoping and will be appraised on the basis of Form 1/ Form 1A and the conceptual plan.

- (ii) The Terms of Reference (TOR) shall be conveyed to the applicant by the Expert Appraisal Committee or State Level Expert Appraisal Committee as concerned within sixty days of the receipt of Form 1. In the case of Category A Hydroelectric projects Item 1(c) (i) of the Schedule the Terms of Reference shall be conveyed along with the clearance for pre-construction activities .If the Terms of Reference are not finalized and conveyed to the applicant within sixty days of the receipt of Form 1, the Terms of Reference suggested by the applicant shall be deemed as the final Terms of Reference approved for the EIA studies. The approved Terms of Reference shall be displayed on the website of the Ministry of Environment and Forests and the concerned State Level Environment Impact Assessment Authority.
- (iii) Applications for prior environmental clearance may be rejected by the regulatory authority concerned on the recommendation of the EAC or SEAC concerned at this stage itself. In case of such rejection, the decision together with reasons for the same shall be communicated to the applicant in writing within sixty days of the receipt of the application.

III. Stage (3) - Public Consultation:

- (i) "Public Consultation" refers to the process by which the concerns of local affected persons and others who have plausible stake in the environmental impacts of the project or activity are ascertained with a view to taking into account all the material concerns in the project or activity design as appropriate. All Category 'A' and Category B1 projects or activities shall undertake Public Consultation, except the following:-

- (a) modernization of irrigation projects (item 1(c) (ii) of the Schedule).

I; II; III (i), (ii); IV (a), (b); V (i), (ii), (iii)(a), (b), (c), (iv), (v), (vi) (a), (b), (vii), (viii) (a), (b), (ix), (x), (xi), (xii) (a), (b), (xiii), (xiv) (a), (b), (xv) (a), (b), (xvi) (a), (b), (xvii); VI (a), (b); VII & VIII of the Notification, S.O. 3067(E) dated 01.12.2009 of the Ministry of Environment and Forests, (Published in the Gazette of India, Extraordinary, Part-II, and Section 3, Sub-section (ii), No. 2002] New Delhi, Tuesday, November 1, 2009; an amendment to EC notification S.O.1533(E) dated 14.09.2006

- (b) all projects or activities located within industrial estates or parks (item 7(c) of the Schedule) approved by the concerned authorities, and which are not disallowed in such approvals.
- (c) expansion of Roads and Highways (item 7 (f) of the Schedule) which do not involve any further acquisition of land.
- ''' (cc) maintenance dredging provided the dredged material shall be disposed within port limits.'';
- ''' (d) All Building or Construction projects or Area Development projects (which do not contain any category 'A' projects and activities) and Townships (item 8(a) and 8(b) in the Schedule to the notification).''
- e) all Category 'B2' projects and activities.
- f) all projects or activities concerning national defence and security or involving other strategic considerations as determined by the Central Government.
- (ii) The Public Consultation shall ordinarily have two components comprising of:-
 - (a) a public hearing at the site or in its close proximity- district wise, to be carried out in the manner prescribed in Appendix IV, for ascertaining concerns of local affected persons;
 - (b) obtain responses in writing from other concerned persons having a plausible stake in the environmental aspects of the project or activity.
- (iii) the public hearing at, or in close proximity to, the site(s) in all cases shall be conducted by the State Pollution Control Board (SPCB) or the Union territory Pollution Control Committee (UTPCC) concerned in the specified manner and forward the proceedings to the regulatory authority concerned within 45(forty five) of a request to the effect from the applicant.
- (iv) in case the State Pollution Control Board or the Union territory Pollution Control Committee concerned does not undertake and complete the public hearing within the specified period, and/or does not convey the proceedings of the public hearing within the prescribed period directly to the regulatory authority concerned as above, the regulatory

I; II; III (i), (ii); IV (a), (b); V (i), (ii), (iii)(a), (b), (c), (iv), (v), (vi) (a), (b), (vii), (viii) (a), (b), (ix), (x), (xi), (xii) (a), (b), (xiii), (xiv) (a), (b), (xv) (a), (b), (xvi) (a), (b), (xvii); VI (a), (b); VII & VIII of the Notification, S.O. 3067(E) dated 01.12.2009 of the Ministry of Environment and Forests, (Published in the Gazette of India, Extraordinary, Part-II, and Section 3, Sub-section (ii), No. 2002] New Delhi, Tuesday, November 1, 2009; an amendment to EC notification S.O.1533(E) dated 14.09.2006

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authority shall engage another public agency or authority which is not subordinate to the regulatory authority, to complete the process within a further period of forty five days,.

- (v) If the public agency or authority nominated under the sub paragraph (iii) above reports to the regulatory authority concerned that owing to the local situation, it is not possible to conduct the public hearing in a manner which will enable the views of the concerned local persons to be freely expressed, it shall report the facts in detail to the concerned regulatory authority, which may, after due consideration of the report and other reliable information that it may have, decide that the public consultation in the case need not include the public hearing.
- (vi) For obtaining responses in writing from other concerned persons having a plausible stake in the environmental aspects of the project or activity, the concerned regulatory authority and the State Pollution Control Board (SPCB) or the Union territory Pollution Control Committee (UTPCC) shall invite responses from such concerned persons by placing on their website the Summary EIA report prepared in the format given in Appendix IIIA by the applicant along with a copy of the application in the prescribed form, within seven days of the receipt of a written request for arranging the public hearing. Confidential information including non-disclosable or legally privileged information involving Intellectual Property Right, source specified in the application shall not be placed on the web site. The regulatory authority concerned may also use other appropriate media for ensuring wide publicity about the project or activity. The regulatory authority shall, however, make available on a written request from any concerned person the Draft EIA report for inspection at a notified place during normal office hours till the date of the public hearing. All the responses received as part of this public consultation process shall be forwarded to the applicant through the quickest available means.
- (vii) After completion of the public consultation, the applicant shall address all the material environmental concerns expressed during this process, and make appropriate changes in the draft EIA and EMP. The final EIA report, so prepared, shall be submitted by the applicant to the concerned regulatory authority for appraisal. The applicant may alternatively submit a supplementary report to draft EIA and EMP addressing all the concerns expressed during the public consultation.

IV. Stage (4) - Appraisal:

I; II; III (i), (ii); IV (a), (b); V (i), (ii), (iii)(a), (b), (c), (iv), (v), (vi) (a), (b), (vii), (viii) (a), (b), (ix), (x), (xi), (xii) (a), (b), (xiii), (xiv) (a), (b), (xv) (a), (b), (xvi) (a), (b), (xvii); VI (a), (b); VII & VIII of the Notification, S.O. 3067(E) dated 01.12.2009 of the Ministry of Environment and Forests, (Published in the Gazette of India, Extraordinary, Part-II, and Section 3, Sub-section (ii), No. 2002] New Delhi, Tuesday, November 1, 2009; an amendment to EC notification S.O.1533(E) dated 14.09.2006

- (i) Appraisal means the detailed scrutiny by the Expert Appraisal Committee or State Level Expert Appraisal Committee of the application and other documents like the Final EIA report, outcome of the public consultations including public hearing proceedings, submitted by the applicant to the regulatory authority concerned for grant of environmental clearance. This appraisal shall be made by Expert Appraisal Committee or State Level Expert Appraisal Committee concerned in a transparent manner in a proceeding to which the applicant shall be invited for furnishing necessary clarifications in person or through an authorized representative. On conclusion of this proceeding, the Expert Appraisal Committee or State Level Expert Appraisal Committee concerned shall make categorical recommendations to the regulatory authority concerned either for grant of prior environmental clearance on stipulated terms and conditions, or rejection of the application for prior environmental clearance, together with reasons for the same.
- (ii) The appraisal of all projects or activities which are not required to undergo public consultation, or submit an Environment Impact Assessment report, shall be carried out on the basis of the prescribed application Form 1 and Form 1A as applicable, any other relevant validated information available and the site visit wherever the same is considered as necessary by the Expert Appraisal Committee or State Level Expert Appraisal Committee concerned.
- (iii) The appraisal of an application shall be completed by the Expert Appraisal Committee or State Level Expert Appraisal Committee concerned within sixty days of the receipt of the final Environment Impact Assessment report and other documents or the receipt of Form 1 and Form 1 A, where public consultation is not necessary and the recommendations of the Expert Appraisal Committee or State Level Expert Appraisal Committee shall be placed before the competent authority for a final decision within the next fifteen days .The prescribed procedure for appraisal is given in Appendix V ;

7(ii). Prior Environmental Clearance (EC) process for Expansion or Modernization or Change of product mix in existing projects:

All applications seeking prior environmental clearance for expansion with increase in the production capacity beyond the capacity for which prior environmental clearance has been granted under this notification or with increase in either lease area or production capacity in the case of mining projects or for the modernization of an existing unit with increase in

I; II; III (i), (ii); IV (a), (b); V (i), (ii), (iii)(a), (b), (c), (iv), (v), (vi) (a), (b), (vii), (viii) (a), (b), (ix), (x), (xi), (xii) (a), (b), (xiii), (xiv) (a), (b), (xv) (a), (b), (xvi) (a), (b), (xvii); VI (a), (b); VII & VIII of the Notification, S.O. 3067(E) dated 01.12.2009 of the Ministry of Environment and Forests, (Published in the Gazette of India, Extraordinary, Part-II, and Section 3, Sub-section (ii), No. 2002] New Delhi, Tuesday, November 1, 2009; an amendment to EC notification S.O.1533(E) dated 14.09.2006

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the total production capacity beyond the threshold limit prescribed in the Schedule to this notification through change in process and or technology or involving a change in the product –mix shall be made in Form I and they shall be considered by the concerned Expert Appraisal Committee or State Level Expert Appraisal Committee within sixty days, who will decide on the due diligence necessary including preparation of EIA and public consultations and the application shall be appraised accordingly for grant of environmental clearance.

8. Grant or Rejection of Prior Environmental Clearance (EC):

- (i) The regulatory authority shall consider the recommendations of the EAC or SEAC concerned and convey its decision to the applicant within forty five days of the receipt of the recommendations of the Expert Appraisal Committee or State Level Expert Appraisal Committee concerned or in other words within one hundred and five days of the receipt of the final Environment Impact Assessment Report, and where Environment Impact Assessment is not required, within one hundred and five days of the receipt of the complete application with requisite documents, except as provided below.
- (ii) The regulatory authority shall normally accept the recommendations of the Expert Appraisal Committee or State Level Expert Appraisal Committee concerned. In cases where it disagrees with the recommendations of the Expert Appraisal Committee or State Level Expert Appraisal Committee concerned, the regulatory authority shall request reconsideration by the Expert Appraisal Committee or State Level Expert Appraisal Committee concerned within forty five days of the receipt of the recommendations of the Expert Appraisal Committee or State Level Expert Appraisal Committee concerned while stating the reasons for the disagreement. An intimation of this decision shall be simultaneously conveyed to the applicant. The Expert Appraisal Committee or State Level Expert Appraisal Committee concerned, in turn, shall consider the observations of the regulatory authority and furnish its views on the same within a further period of sixty days. The decision of the regulatory authority after considering the views of the Expert Appraisal Committee or State Level Expert Appraisal Committee concerned shall be final and conveyed to the applicant by the regulatory authority concerned within the next thirty days.
- (iii) In the event that the decision of the regulatory authority is not communicated to the applicant within the period specified in sub-paragraphs (i) or (ii) above, as applicable, the

I; II; III (i), (ii); IV (a), (b); V (i), (ii), (iii)(a), (b), (c), (iv), (v), (vi) (a), (b), (vii), (viii) (a), (b), (ix), (x), (xi), (xii) (a), (b), (xiii), (xiv) (a), (b), (xv) (a), (b), (xvi) (a), (b), (xvii); VI (a), (b); VII & VIII of the Notification, S.O. 3067(E) dated 01.12.2009 of the Ministry of Environment and Forests, (Published in the Gazette of India, Extraordinary, Part-II, and Section 3, Sub-section (ii), No. 2002] New Delhi, Tuesday, November 1, 2009; an amendment to EC notification S.O.1533(E) dated 14.09.2006

applicant may proceed as if the environment clearance sought for has been granted or denied by the regulatory authority in terms of the final recommendations of the Expert Appraisal Committee or State Level Expert Appraisal Committee concerned.

- (iv) On expiry of the period specified for decision by the regulatory authority under paragraph (i) and (ii) above, as applicable, the decision of the regulatory authority, and the final recommendations of the Expert Appraisal Committee or State Level Expert Appraisal Committee concerned shall be public documents.
- (v) Clearances from other regulatory bodies or authorities shall not be required prior to receipt of applications for prior environmental clearance of projects or activities, or screening, or scoping, or appraisal, or decision by the regulatory authority concerned, unless any of these is sequentially dependent on such clearance either due to a requirement of law, or for necessary technical reasons.
- (vi) Deliberate concealment and/or submission of false or misleading information or data which is material to screening or scoping or appraisal or decision on the application shall make the application liable for rejection, and cancellation of prior environmental clearance granted on that basis. Rejection of an application or cancellation of a prior environmental clearance already granted, on such ground, shall be decided by the regulatory authority, after giving a personal hearing to the applicant, and following the principles of natural justice.

9. Validity of Environmental Clearance (EC):

The "Validity of Environmental Clearance" is meant the period from which a prior environmental clearance is granted by the regulatory authority, or may be presumed by the applicant to have been granted under sub paragraph (iv) of paragraph 7 above, to the start of production operations by the project or activity, or completion of all construction operations in case of construction projects (item 8 of the Schedule), to which the application for prior environmental clearance refers. The prior environmental clearance granted for a project or activity shall be valid for a period of ten years in the case of River Valley projects (item 1(c) of the Schedule), project life as estimated by Expert Appraisal Committee or State Level Expert Appraisal Committee subject to a maximum of thirty years for mining projects and five years in the case of all other projects and activities. However, in the case of Area Development projects and Townships [item 8(b)], the validity

I; II; III (i), (ii); IV (a), (b); V (i), (ii), (iii)(a), (b), (c), (iv), (v), (vi) (a), (b), (vii), (viii) (a), (b), (ix), (x), (xi), (xii) (a), (b), (xiii), (xiv) (a), (b), (xv) (a), (b), (xvi) (a), (b), (xvii); VI (a), (b); VII & VIII of the Notification, S.O. 3067(E) dated 01.12.2009 of the Ministry of Environment and Forests, (Published in the Gazette of India, Extraordinary, Part-II, and Section 3, Sub-section (ii), No. 2002] New Delhi, Tuesday, November 1, 2009; an amendment to EC notification S.O.1533(E) dated 14.09.2006

period shall be limited only to such activities as may be the responsibility of the applicant as a developer. This period of validity may be extended by the regulatory authority concerned by a maximum period of five years provided an application is made to the regulatory authority by the applicant within the validity period, together with an updated Form 1, and Supplementary Form 1A, for Construction projects or activities (item 8 of the Schedule). In this regard the regulatory authority may also consult the Expert Appraisal Committee or State Level Expert Appraisal Committee as the case may be.

10. Post Environmental Clearance Monitoring:

- IV (i)(a) In respect of Category 'A' project, it shall be mandatory for the project proponent to make public the environment clearance granted for their project along with the environmental conditions and safeguards at their cost by prominently advertising it at least in two local newspapers of the district or State where the project is located and in addition, this shall also be displayed in the project proponent's website permanently.
- (b) In respect of Category 'B' projects, irrespective of its clearance by MoEF / SEIAA, the project proponent shall prominently advertise in the newspapers indicating that the project has been accorded environment clearance and the details of the MoEF website where it is displayed.
- (c) The Ministry of Environment and Forests and the State/Union Territory Level Environmental Impact Assessment Authorities (SEIAAs), as the case may be, shall also place the environmental clearance in the public domain on Governmental portal.
- (d) The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.”;
- IV (ii) It shall be mandatory for the project management to submit half-yearly compliance reports in respect of the stipulated prior environmental clearance terms and conditions in hard and soft copies to the regulatory authority concerned, on 1st June and 1st December of each calendar year.
- IV (iii) All such compliance reports submitted by the project management shall be public documents. Copies of the same shall be given to any person on application to the

I; II; III (i), (ii); IV (a), (b); V (i), (ii), (iii)(a), (b), (c), (iv), (v), (vi) (a), (b), (vii), (viii) (a), (b), (ix), (x), (xi), (xii) (a), (b), (xiii), (xiv) (a), (b), (xv) (a), (b), (xvi) (a), (b), (xvii); VI (a), (b); VII & VIII of the Notification, S.O. 3067(E) dated 01.12.2009 of the Ministry of Environment and Forests, (Published in the Gazette of India, Extraordinary, Part-II, and Section 3, Sub-section (ii), No. 2002] New Delhi, Tuesday, November 1, 2009; an amendment to EC notification S.O.1533(E) dated 14.09.2006

concerned regulatory authority. The latest such compliance report shall also be displayed on the web site of the concerned regulatory authority.

11. Transferability of Environmental Clearance (EC):

A prior environmental clearance granted for a specific project or activity to an applicant may be transferred during its validity to another legal person entitled to undertake the project or activity on application by the transferor, or by the transferee with a written "no objection" by the transferor, to, and by the regulatory authority concerned, on the same terms and conditions under which the prior environmental clearance was initially granted, and for the same validity period. No reference to the Expert Appraisal Committee or State Level Expert Appraisal Committee concerned is necessary in such cases.

12. Operation of EIA Notification, 1994, till disposal of pending cases:

From the date of final publication of this notification the Environment Impact Assessment (EIA) notification number S.O.60 (E) dated 27th January, 1994 is hereby superseded, except in suppression of the things done or omitted to be done before such suppression to the extent that in case of all or some types of applications made for prior environmental clearance and pending on the date of final publication of this notification, the Central Government may relax any one or all provisions of this notification except the list of the projects or activities requiring prior environmental clearance in Schedule I , or continue operation of some or all provisions of the said notification, for a period not exceeding one year from the date of issue of this notification.

I; II; III (i), (ii); IV (a), (b); V (i), (ii), (iii)(a), (b), (c), (iv), (v), (vi) (a), (b), (vii), (viii) (a), (b), (ix), (x), (xi), (xii) (a), (b) , (xiii), (xiv) (a), (b), (xv) (a), (b), (xvi) (a), (b), (xvii); VI (a), (b); VII & VIII of the Notification, S.O. 3067(E) dated 01.12.2009 of the Ministry of Environment and Forests, (Published in the Gazette of India, Extraordinary, Part-II, and Section 3, Sub-section (ii), No. 2002] New Delhi, Tuesday, November 1, 2009; an amendment to EC notification S.O.1533(E) dated 14.09.2006

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SCHEDULE

(See paragraph 2 and 7)

LIST OF PROJECTS OR ACTIVITIES REQUIRING PRIOR ENVIRONMENTAL CLEARANCE

Project or Activity		Category with threshold limit		Conditions if any
		A	B	
1		Mining, extraction of natural resources and power generation (for a specified production capacity)		
(1)	(2)	(3)	(4)	(5)
v "1(a)	(i) Mining of minerals. (ii) Slurry pipelines (coal lignite and other ores) passing through national parks / sanctuaries / coral reefs, ecologically sensitive areas.	≥ 50 ha. of mining lease area in respect of non-coal mine lease. > 150 ha of mining lease area in respect of coal mine lease. Asbestos mining irrespective of mining area All projects.	<50 ha ≥ 5 ha .of mining lease area in respect of non-coal mine lease. ≤ 150 ha ≥ 5 ha of mining lease area in respect of coal mine lease.	General Condition shall apply Note: Mineral prospecting is exempted.”;
1(b)	Offshore and onshore oil and gas exploration, development & production	All projects		<u>Note</u> Exploration Surveys (not involving drilling) are exempted provided the concession areas have got previous clearance for physical survey
1(c)	River Valley projects	(i) ≥ 50 MW hydroelectric power generation; (ii) ≥ 10,000 ha. of culturable command area	(i) < 50 MW ≥ 25 MW hydroelectric power generation; (ii) < 10,000 ha. of culturable command area	v “General Condition shall apply. Note: Irrigation projects not involving submergence or inter-state domain shall be appraised by the SEIAA as Category ‘B’ Projects.”;

I; II; III (i), (ii); IV (a), (b); V (i), (ii), (iii)(a), (b), (c), (iv), (v), (vi) (a), (b), (vii), (viii) (a), (b), (ix), (x), (xi), (xii) (a), (b), (xiii), (xiv) (a), (b), (xv) (a), (b), (xvi) (a), (b), (xvii); VI (a), (b); VII & VIII of the Notification, S.O. 3067(E) dated 01.12.2009 of the Ministry of Environment and Forests, (Published in the Gazette of India, Extraordinary, Part-II, and Section 3, Sub-section (ii), No. 2002] New Delhi, Tuesday, November 1, 2009; an amendment to EC notification S.O.1533(E) dated 14.09.2006

(1)	(2)	(3)	(4)	(5)
1(d)	Thermal Power Plants	^v " ≥ 500 MW (coal / lignite / naphtha & gas based); ≥ 50 MW (Pet coke diesel and all other fuels including refinery residual oil waste except biomass); ≥ 20 MW (based on biomass or non hazardous municipal waste as fuel).";	< 500 MW (coal / lignite / naphtha & gas based); <50 MW ≥ 5MW (Pet coke, diesel and all other fuels including refinery residual oil waste except biomass); ≥ 20 MW > 15 MW (based on biomass or non hazardous municipal waste as fuel).";	^v "General Condition shall apply. Note: (i) Power plant up to 15 MW, based on biomass and using auxiliary fuel such as coal / lignite / petroleum products up to 15% are exempt. (ii) Power plant up to 15 MW, based on non-hazardous municipal waste and using auxiliary fuel such as coal / lignite / petroleum products up to 15% are exempt. (iii) Power plants using waste heat boiler without any auxiliary fuel are exempt.";
1(e)	Nuclear power projects and processing of nuclear fuel	All projects		
2		Primary Processing		
2(a)	Coal washeries	≥ 1 million ton/annum throughput of coal	<1million ton/annum throughput of coal	General Condition shall apply (If located within mining area the proposal shall be appraised together with the mining proposal)
2 (b)	Mineral beneficiation	≥ 0.1million ton/annum mineral throughput	< 0.1million ton/annum mineral throughput	General Condition shall apply (Mining proposal with Mineral beneficiation shall be appraised together for grant of clearance)

I; II; III (i), (ii); IV (a), (b); V (i), (ii), (iii)(a), (b), (c), (iv), (v), (vi) (a), (b), (vii), (viii) (a), (b), (ix), (x), (xi), (xii) (a), (b), (xiii), (xiv) (a), (b), (xv) (a), (b), (xvi) (a), (b), (xvii); VI (a), (b); VII & VIII of the Notification, S.O. 3067(E) dated 01.12.2009 of the Ministry of Environment and Forests, (Published in the Gazette of India, Extraordinary, Part-II, and Section 3, Sub-section (ii), No. 2002] New Delhi, Tuesday, November 1, 2009; an amendment to EC notification S.O.1533(E) dated 14.09.2006

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3				
(1)	(2)	(3)	(4)	(5)
3(a)	Metallurgical industries (ferrous & non ferrous)	a) Primary metallurgical industry All projects b) Sponge iron manufacturing ≥ 200 TPD c) Secondary metallurgical processing industry All toxic and heavy metal producing units $\geq 20,000$ tonnes /annum	Sponge iron manufacturing < 200 TPD Secondary metallurgical processing industry i.) All toxic and heavy metal producing units $< 20,000$ tonnes /annum ii.) All other non-toxic secondary metallurgical processing industries > 5000 tonnes/annum	^v "General condition shall apply. Note: (i) The recycling industrial units registered under the HSM Rules, are exempted. (ii) In case of secondary metallurgical processing industrial units, those projects involving operation of furnaces only such as induction and electrical arc furnace, submerged arc furnace, and cupola with capacity more than 30,000 tonnes per annum (TPA) would require environmental clearance. (iii) Plant / units other than power plants (given against entry no. 1(d) of the schedule), based on municipal solid waste (non-hazardous) are exempted."
3(b)	Cement plants	≥ 1.0 million tonnes/annum production capacity	< 1.0 million tonnes/annum production capacity. All Stand alone grinding units	General Condition shall apply
4				
(1)	(2)	(3)	(4)	(5)
4(a)	Petroleum refining industry	All projects	-	-
4(b)	Coke oven plants	$\geq 2,50,000$ tonnes/annum	$< 2,50,000$ & $\geq 25,000$ tonnes/annum	^v "General Condition shall apply."
4(c)	Asbestos milling and asbestos based products	All projects	-	-

I; II; III (i), (ii); IV (a), (b); V (i), (ii), (iii)(a), (b), (c), (iv), (v), (vi) (a), (b), (vii), (viii) (a), (b), (ix), (x), (xi), (xii) (a), (b), (xiii), (xiv) (a), (b), (xv) (a), (b), (xvi) (a), (b), (xvii); VI (a), (b); VII & VIII of the Notification, S.O. 3067(E) dated 01.12.2009 of the Ministry of Environment and Forests, (Published in the Gazette of India, Extraordinary, Part-II, and Section 3, Sub-section (ii), No. 2002] New Delhi, Tuesday, November 1, 2009; an amendment to EC notification S.O.1533(E) dated 14.09.2006

(1)	(2)	(3)	(4)	(5)
4(d)	Chlor-alkali industry	≥300 TPD production Capacity or a unit located out side the notified industrial area/ estate	√ "(i) All projects irrespective of the size, if located in a Notified Industrial Area/ Estate. (ii) <300 tonnes per day (TPD) and located outside a Notified Industrial Area/ Estate."	√ "General as well as specific condition shall apply. No new Mercury Cell based plants will be permitted and existing units converting to membrane cell technology are exempted from this notification."
4(e)	Soda ash Industry	All projects	-	-
4(f)	Leather/skin/hide processing industry	New projects outside the industrial area or expansion of existing units out side the industrial area	All new or expansion of projects located within a notified industrial area/ estate	√ "General as well as specific condition shall apply."
5		Manufacturing / Fabrication		
5(a)	Chemical fertilizers	√ "All projects except Single Super Phosphate."	√ "Single Super Phosphate."	-
5(b)	Pesticides industry and pesticide specific intermediates (excluding formulations)	All units producing technical grade pesticides	-	-
5(c)	Petro-chemical complexes (industries based on processing of petroleum fractions & natural gas and/or reforming to aromatics)	All projects -	-	-
5(d)	Manmade fibers manufacturing	Rayon	Others	General Condition shall apply
5(e)	Petrochemical based processing (processes other than cracking & reformation and not covered under the complexes)	Located out side the notified industrial area/ estate -	Located in a notified industrial area/ estate	√ "General as well as specific condition shall apply."

I; II; III (i), (ii); IV (a), (b); V (i), (ii), (iii)(a), (b), (c), (iv), (v), (vi) (a), (b), (vii), (viii) (a), (b), (ix), (x), (xi), (xii) (a), (b), (xiii), (xiv) (a), (b), (xv) (a), (b), (xvi) (a), (b), (xvii); VI (a), (b); VII & VIII of the Notification, S.O. 3067(E) dated 01.12.2009 of the Ministry of Environment and Forests, (Published in the Gazette of India, Extraordinary, Part-II, and Section 3, Sub-section (ii), No. 2002] New Delhi, Tuesday, November 1, 2009; an amendment to EC notification S.O.1533(E) dated 14.09.2006

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(1)	(2)	(3)	(4)	(5)
5(f)	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)	Located out side the notified industrial area/ estate	Located in a notified industrial area/ estate	^v "General as well as specific condition shall apply."
5(g)	Distilleries	(i) All Molasses based distilleries (ii) All Cane juice/ non-molasses based distilleries ≥ 30 KLD	All Cane juice / non-molasses based distilleries - <30 KLD	General Condition shall apply
5(h)	Integrated paint industry	-	All projects	General Condition shall apply
5(i)	Pulp & paper industry excluding manufacturing of paper from waste paper and manufacture of paper from ready pulp with out bleaching	Pulp manufacturing and Pulp & Paper manufacturing industry	Paper manufacturing industry without pulp manufacturing	General Condition shall apply
5(j)	Sugar Industry	-	≥ 5000 tcd cane crushing capacity	General Condition shall apply
5(k)	^v Omitted			
6		Service Sectors		
6(a)	Oil & gas transportation pipe line (crude and refinery/ petrochemical products), passing through national parks / sanctuaries / coral reefs / ecologically sensitive areas including LNG Terminal	All projects		-

I; II; III (i), (ii); IV (a), (b); V (i), (ii), (iii)(a), (b), (c), (iv), (v), (vi) (a), (b), (vii), (viii) (a), (b), (ix), (x), (xi), (xii) (a), (b), (xiii), (xiv) (a), (b), (xv) (a), (b), (xvi) (a), (b), (xvii); VI (a), (b); VII & VIII of the Notification, S.O. 3067(E) dated 01.12.2009 of the Ministry of Environment and Forests, (Published in the Gazette of India, Extraordinary, Part-II, and Section 3, Sub-section (ii), No. 2002] New Delhi, Tuesday, November 1, 2009; an amendment to EC notification S.O.1533(E) dated 14.09.2006

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(1)	(2)	(3)	(4)	(5)
6(b)	Isolated storage & handling of hazardous chemicals (As per threshold planning quantity indicated in column 3 of schedule 2 & 3 of MSIHC Rules 1989 amended 2000)	-	All projects	General Condition shall apply
7		Physical Infrastructure including Environmental Services		
7(a)	Air ports	^v "All projects including airstrips, which are for commercial use."	-	^v "Note: Air strips, which do not involve bunkering/ refueling facility and or Air Traffic Control, are exempted."
7(b)	All ship breaking yards including ship breaking units	All projects	-	-
7©	Industrial estates/ parks/ complexes/ areas, export processing Zones (EPZs), Special Economic Zones (SEZs), Biotech Parks, Leather Complexes.	If at least one industry in the proposed industrial estate falls under the Category A, entire industrial area shall be treated as Category A, irrespective of the area. Industrial estates with area greater than 500 ha. and housing at least one Category B industry.	Industrial estates housing at least one Category B industry and area <500 ha. Industrial estates of area > 500 ha. and not housing any industry belonging to Category A or B.	^v "General as well as special conditions shall apply. Note: 1. Industrial Estate of area below 500 ha. and not housing any industry of Category 'A' or 'B' does not require clearance. 2. If the area is less than 500 ha. but contains building and construction projects > 20,000 Sq. mts. And or development area more than 50 ha it will be treated as activity listed at serial no. 8(a) or 8(b) in the Schedule, as the case may be."
7(d)	Common hazardous waste treatment, storage and disposal facilities (TSDFs)	All integrated facilities having incineration & landfill or incineration alone	All facilities having land fill only	General Condition shall apply

I; II; III (i), (ii); IV (a), (b); V (i), (ii), (iii)(a), (b), (c), (iv), (v), (vi) (a), (b), (vii), (viii) (a), (b), (ix), (x), (xi), (xii) (a), (b), (xiii), (xiv) (a), (b), (xv) (a), (b), (xvi) (a), (b), (xvii); VI (a), (b); VII & VIII of the Notification, S.O. 3067(E) dated 01.12.2009 of the Ministry of Environment and Forests, (Published in the Gazette of India, Extraordinary, Part-II, and Section 3, Sub-section (ii), No. 2002] New Delhi, Tuesday, November 1, 2009; an amendment to EC notification S.O.1533(E) dated 14.09.2006

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(1)	(2)	(3)	(4)	(5)
7(e)	^v "Ports, harbours, break waters, dredging."	≥ 5 million TPA of cargo handling capacity (excluding fishing harbours)	< 5 million TPA of cargo handling capacity and/or ports/ harbours ≥10,000 TPA of fish handling capacity	^v "General Condition shall apply. Note: 1. Capital dredging inside and outside the ports or harbors and channels are included; 2. Maintenance dredging is exempt provided it formed part of the original proposal for which Environment Management Plan (EMP) was prepared and environmental clearance obtained."
7(f)	Highways	i) New National High ways; and ii) Expansion of National High ways greater than 30 KM, involving additional right of way greater than 20m involving land acquisition and passing through more than one State.	^v " i) All State Highway Project; and ii) State Highway expansion projects in hilly terrain (above 1,000 m AMSL) and or ecologically sensitive areas."	General Condition shall apply. Note: Highways include expressways."
7(g)	Aerial ropeways	^{v(xvi)(a)} "(i) All projects located at altitude of 1,000 mtr. And above. (ii) All projects located in notified ecologically sensitive areas."	^{v(xvi)(b)} "All projects except those covered in column (3)."	General Condition shall apply
7(h)	Common Effluent Treatment Plants (CETPs)		All projects	General Condition shall apply
7(i)	Common Municipal Solid Waste Management Facility (CMSWMF)		All projects	General Condition shall apply
8		Building /Construction projects/Area Development projects and Townships		
8(a)	Building and Construction projects		≥20000 sq.mtrs and <1,50,000 sq.mtrs. of built-up area#	#(built up area for covered construction; in the case of facilities open to the sky, it will be the activity area)
8(b)	Townships and Area Development projects.		Covering an area ≥ 50 ha and or built up area ≥1,50,000 sq .mtrs ++	++All projects under Item 8(b) shall be appraised as Category B1

I; II; III (i), (ii); IV (a), (b); V (i), (ii), (iii)(a), (b), (c), (iv), (v), (vi) (a), (b), (vii), (viii) (a), (b), (ix), (x), (xi), (xii) (a), (b), (xiii), (xiv) (a), (b), (xv) (a), (b), (xvi) (a), (b), (xvii); VI (a), (b); VII & VIII of the Notification, S.O. 3067(E) dated 01.12.2009 of the Ministry of Environment and Forests, (Published in the Gazette of India, Extraordinary, Part-II, and Section 3, Sub-section (ii), No. 2002] New Delhi, Tuesday, November 1, 2009; an amendment to EC notification S.O.1533(E) dated 14.09.2006

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Note:-**V(xvii) "General Condition (GC):**

Any project or activity specified in Category 'B' will be treated as Category A, if located in whole or in part within 10 km from the boundary of: (i) Protected Areas notified under the Wild Life (Protection) Act, 1972, (ii) Critically Polluted areas as identified by the Central Pollution Control Board from time to time, (iii) Eco-sensitive areas as notified under section 3 of the Environment (Protection) Act, 1986, such as, Mahabaleshwar Panchgani, Matheran, Pachmarhi, Dahanu, Doon Valley, and (iv) inter-State boundaries and international boundaries:

Provided that the requirement regarding distance of 10 km of the inter-State boundaries can be reduced or completely done away with by an agreement between the respective States or U.Ts sharing the common boundary in case the activity does not fall within 10 kilometres of the areas mentioned at item (i), (ii) and (iii) above."

Specific Condition (SC):

If any Industrial Estate/Complex / Export processing Zones /Special Economic Zones/Biotech Parks / Leather Complex with homogeneous type of industries such as Items 4(d), 4(f), 5(e), 5(f), or those Industrial estates with pre -defined set of activities (not necessarily homogeneous, obtains prior environmental clearance, individual industries including proposed industrial housing within such estates /complexes will not be required to take prior environmental clearance, so long as the Terms and Conditions for the industrial estate/complex are complied with (Such estates/complexes must have a clearly identified management with the legal responsibility of ensuring adherence to the Terms and Conditions of prior environmental clearance, who may be held responsible for violation of the same throughout the life of the complex/estate).

[No. J-11013/56/2004-IA-II (I)]
(R.CHANDRAMOHAN)

JOINT SECRETARY TO THE GOVERNMENT OF INDIA

I; II; III (i), (ii); IV (a), (b); V (i), (ii), (iii)(a), (b), (c), (iv), (v), (vi) (a), (b), (vii), (viii) (a), (b), (ix), (x), (xi), (xii) (a), (b), (xiii), (xiv) (a), (b), (xv) (a), (b), (xvi) (a), (b), (xvii); VI (a), (b); VII & VIII of the Notification, S.O. 3067(E) dated 01.12.2009 of the Ministry of Environment and Forests, (Published in the Gazette of India, Extraordinary, Part-II, and Section 3, Sub-section (ii), No. 2002] New Delhi, Tuesday, November 1, 2009; an amendment to EC notification S.O.1533(E) dated 14.09.2006

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APPENDIX I

(See paragraph – 6)

FORM 1

VI(a) "(I) Basic Information

Serial Number	Item	Details
1.	Name of the project/s	
2.	S. No. in schedule	
3.	Proposed capacity/area/length/tonnage to be handled/command area/lease area/number of wells to be drilled	
4.	New/Expansion/Modernization	
5.	Existing Capacity/Area etc.	
6.	Category of Project i.e. 'A' or 'B'	
7.	Does it attract the general condition? If Yes, please specify.	
8.	Does it attract the specific condition? If Yes, please specify.	
9.	Location	
	Plot/Survey/Khasra No.	
	Village	
	Tehsil	
	District	
	State	
10.	Nearest railway station/airport along with distance in kms.	
11.	Nearest Town, city, District Headquarters along with distance in kms.	
12.	Village Panchayats, Zilla Parishad, Municipal Corporation, Local body (complete postal addresses with telephone nos. to be given)	
13.	Name of the applicant	
14.	Registered Address	
15.	Address for correspondence:	
	Name	
	Designation (Owner/Partner/CEO)	
	Address	
	Pin Code	
	E-mail	
	Telephone No.	
Fax No.		
16	Details of Alternative Sites examined, if any. Location of these sites should be shown on a topo sheet.	Village-District-State 1. 2. 3.
17.	Interlinked Projects	
18	Whether separate application of interlinked project has been submitted?	

I; II; III (i), (ii); IV (a), (b); V (i), (ii), (iii)(a), (b), (c), (iv), (v), (vi) (a), (b), (vii), (viii) (a), (b), (ix), (x), (xi), (xii) (a), (b), (xiii), (xiv) (a), (b), (xv) (a), (b), (xvi) (a), (b), (xvii); VI (a), (b); VII & VIII of the Notification, S.O. 3067(E) dated 01.12.2009 of the Ministry of Environment and Forests, (Published in the Gazette of India, Extraordinary, Part-II, and Section 3, Sub-section (ii), No. 2002] New Delhi, Tuesday, November 1, 2009; an amendment to EC notification S.O.1533(E) dated 14.09.2006

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19.	If yes, date of submission	
20.	If no, reason	
21.	Whether the proposal involves approval/ clearance under: If yes, details of the same and their status to be given. (a) The Forest (Conservation) Act, 1980 ? (b) The Wildlife (Protection) Act, 1972 ? (c) The C.R.Z. Notification, 1991 ?	
22.	Whether there is any Government Order/Policy relevant/ relating to the site ?	
23.	Forest land involved (hectares)	
24.	Whether there is any litigation pending against the project and/or land in which the project is propose to be set up ? (a) Name of the Court. (b) Case No. (c) Orders/directions of the Court, if any and its relevance with the proposed project.	

(II) Activity

1. **Construction, operation or decommissioning of the Project involving actions, which will cause physical changes in the locality (topography, land use, changes in water bodies, etc.)**

S.No.	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities /rates, wherever possible) with source of information data
1.1	Permanent or temporary change in land use, land cover or topography including increase in intensity of land use (with respect to local land use plan)		
1.2	Clearance of existing land, vegetation and buildings?		
1.3	Creation of new land uses?		
1.4	Pre-construction investigations e.g. bore houses, soil testing?		
1.5	Construction works?		
1.6	Demolition works?		
1.7	Temporary sites used for construction works or housing of construction workers?		
1.8	Above ground buildings, structures or earthworks including linear structures, cut And fill or excavations		

I; II; III (i), (ii); IV (a), (b); V (i), (ii), (iii)(a), (b), (c), (iv), (v), (vi) (a), (b), (vii), (viii) (a), (b), (ix), (x), (xi), (xii) (a), (b), (xiii), (xiv) (a), (b), (xv) (a), (b), (xvi) (a), (b), (xvii); VI (a), (b); VII & VIII of the Notification, S.O. 3067(E) dated 01.12.2009 of the Ministry of Environment and Forests, (Published in the Gazette of India, Extraordinary, Part-II, and Section 3, Sub-section (ii), No. 2002] New Delhi, Tuesday, November 1, 2009; an amendment to EC notification S.O.1533(E) dated 14.09.2006

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1.9	Underground works including mining or tunneling?		
1.10	Reclamation works?		
1.11	Dredging?		
1.12	Offshore structures?		
1.13	Production and manufacturing processes?		
1.14	Facilities for storage of goods or materials?		
1.15	Facilities for treatment or disposal of solid waste or liquid effluents?		
1.16	Facilities for long term housing of operational workers?		
1.17	New road, rail or sea traffic during construction or operation?		
1.18	New road, rail, air waterborne or other transport infrastructure including new or altered routes and stations, ports, airports etc?		
1.19	Closure or diversion of existing transport routes or infrastructure leading to changes in traffic movements?		
1.20	New or diverted transmission lines or pipelines?		
1.21	Impoundment, damming, culverting, realignment or other changes to the hydrology of watercourses or aquifers?		
1.22	Stream crossings?		
1.23	Abstraction or transfers of water from ground or surface waters?		
1.24	Changes in water bodies or the land surface affecting drainage or run-off?		
1.25	Transport of personnel or materials for construction, operation or decommissioning?		
1.26	Long-term dismantling or decommissioning or restoration works?		
1.27	Ongoing activity during decommissioning which could have an impact on the environment?		
1.28	Influx of people to an area in either temporarily or permanently?		
1.29	Introduction of alien species?		

I; II; III (i), (ii); IV (a), (b); V (i), (ii), (iii)(a), (b), (c), (iv), (v), (vi) (a), (b), (vii), (viii) (a), (b), (ix), (x), (xi), (xii) (a), (b), (xiii), (xiv) (a), (b), (xv) (a), (b), (xvi) (a), (b), (xvii); VI (a), (b); VII & VIII of the Notification, S.O. 3067(E) dated 01.12.2009 of the Ministry of Environment and Forests, (Published in the Gazette of India, Extraordinary, Part-II, and Section 3, Sub-section (ii), No. 2002] New Delhi, Tuesday, November 1, 2009; an amendment to EC notification S.O.1533(E) dated 14.09.2006

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1.30	Loss of native species or genetic diversity?		
1.31	Any other actions?		

2. Use of Natural resources for construction or operation of the Project (such as land, water, materials or energy, especially any resources which are non-renewable or in short supply):

S.No.	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities /rates, wherever possible) with source of information data
2.1	Land especially undeveloped or agricultural land (ha)		
2.2	Water (expected source & competing users) unit: KLD		
2.3	Minerals (MT)		
2.4	Construction material – stone, aggregates, sand / soil (expected source – MT)		
2.5	Forests and timber (source – MT)		
2.6	Energy including electricity and fuels (source, competing users) Unit: fuel (MT), energy (MW)		
2.7	Any other natural resources (use appropriate standard units)		

3. Use, storage, transport, handling or production of substances or materials, which could be harmful to human health or the environment or raise concerns about actual or perceived risks to human health.

S.No.	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities /rates, wherever possible) with source of information data
3.1	Use of substances or materials, which are hazardous (as per MSIHC rules) to human health or the environment (flora, fauna, and water supplies)		
3.2	Changes in occurrence of disease or affect disease vectors (e.g. insect or water borne diseases)		
3.3	Affect the welfare of people e.g. by changing living conditions?		
3.4	Vulnerable groups of people who could be affected by the project e.g. hospital patients, children, the elderly etc.,		
3.5	Any other causes		

I; II; III (i), (ii); IV (a), (b); V (i), (ii), (iii)(a), (b), (c), (iv), (v), (vi) (a), (b), (vii), (viii) (a), (b), (ix), (x), (xi), (xii) (a), (b), (xiii), (xiv) (a), (b), (xv) (a), (b), (xvi) (a), (b), (xvii); VI (a), (b); VII & VIII of the Notification, S.O. 3067(E) dated 01.12.2009 of the Ministry of Environment and Forests, (Published in the Gazette of India, Extraordinary, Part-II, and Section 3, Sub-section (ii), No. 2002] New Delhi, Tuesday, November 1, 2009; an amendment to EC notification S.O.1533(E) dated 14.09.2006

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4. Production of solid wastes during construction or operation or decommissioning (MT/month)

S.No.	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities/rates, wherever possible) with source of information data
4.1	Spoil, overburden or mine wastes		
4.2	Municipal waste (domestic and or commercial wastes)		
4.3	Hazardous wastes (as per Hazardous Waste Management Rules)		
4.4	Other industrial process wastes		
4.5	Surplus product		
4.6	Sewage sludge or other sludge from effluent treatment.		
4.7	Construction or demolition wastes		
4.8	Redundant machinery or equipment		
4.9	Contaminated soils or other materials		
4.10	Agricultural wastes		
4.11	Other solid wastes		

5. Release of pollutants or any hazardous, toxic or noxious substances to air (Kg/hr)

S.No.	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities/rates, wherever possible) with source of information data
5.1	Emissions from combustion of fossil fuels from stationary or mobile sources.		
5.2	Emissions from production processes		
5.3	Emissions from materials handling including storage or transport		
5.4	Emissions from construction activities including plant and equipment		
5.5	Dust or odours from handling of materials including construction materials, sewage and waste		

I; II; III (i), (ii); IV (a), (b); V (i), (ii), (iii)(a), (b), (c), (iv), (v), (vi) (a), (b), (vii), (viii) (a), (b), (ix), (x), (xi), (xii) (a), (b), (xiii), (xiv) (a), (b), (xv) (a), (b), (xvi) (a), (b), (xvii); VI (a), (b); VII & VIII of the Notification, S.O. 3067(E) dated 01.12.2009 of the Ministry of Environment and Forests, (Published in the Gazette of India, Extraordinary, Part-II, and Section 3, Sub-section (ii), No. 2002] New Delhi, Tuesday, November 1, 2009; an amendment to EC notification S.O.1533(E) dated 14.09.2006

5.6	Emissions from incineration of waste		
5.7	Emissions from burning of waste in open air (e.g. slash materials, construction debris)		
5.8	Emissions from any other sources		

6. Generation of Noise and Vibration, and Emissions of Light and Heat:

S.No.	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities/rates, wherever possible) with source of information data
6.1	From operation of equipment e.g. engines, ventilation plant, crushers		
6.2	From industrial or similar processes		
6.3	From construction or demolition		
6.4	From blasting or piling		
6.5	From construction or operational traffic		
6.6	From lighting or cooling systems		
6.7	From any other sources		

7. Risks of contamination of land or water from releases of pollutants into the ground or into sewers, surface waters, groundwater, coastal waters or the sea:

S.No.	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities/rates, wherever possible) with source of information data
7.1	From handling, storage, use or spillage of hazardous materials		
7.2	From discharge of sewage or other effluents to water or the land (expected mode and place of discharge)		
7.3	By deposition of pollutants emitted to air into the land or into water		
7.4	From any other sources		
7.5	Is there a risk of long term build up of pollutants in the environment from these sources?		

I; II; III (i), (ii); IV (a), (b); V (i), (ii), (iii)(a), (b), (c), (iv), (v), (vi) (a), (b), (vii), (viii) (a), (b), (ix), (x), (xi), (xii) (a), (b), (xiii), (xiv) (a), (b), (xv) (a), (b), (xvi) (a), (b), (xvii); VI (a), (b); VII & VIII of the Notification, S.O. 3067(E) dated 01.12.2009 of the Ministry of Environment and Forests, (Published in the Gazette of India, Extraordinary, Part-II, and Section 3, Sub-section (ii), No. 2002] New Delhi, Tuesday, November 1, 2009; an amendment to EC notification S.O.1533(E) dated 14.09.2006

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8. Risk of accidents during construction or operation of the Project, which could affect human health or the environment

S.No.	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities/rates, wherever possible) with source of information data
8.1	From explosions, spillages, fires etc from storage, handling, use or production of hazardous substances		
8.2	From any other causes		
8.3	Could the project be affected by natural disasters causing environmental damage (e.g. floods, earthquakes, landslides, cloudburst etc)?		

9. Factors which should be considered (such as consequential development) which could lead to environmental effects or the potential for cumulative impacts with other existing or planned activities in the locality

S.No.	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities/rates, wherever possible) with source of information data
9.1	Lead to development of supporting. lities, ancillary development or development stimulated by the project which could have impact on the environment e.g.: <ul style="list-style-type: none"> • Supporting infrastructure (roads, power supply, waste or waste water treatment, etc.) • housing development • extractive industries • supply industries • other 		
9.2	Lead to after-use of the site, which could have an impact on the environment		
9.3	Set a precedent for later developments		
9.4	Have cumulative effects due to proximity to other existing or planned projects with similar effects		

I; II; III (i), (ii); IV (a), (b); V (i), (ii), (iii)(a), (b), (c), (iv), (v), (vi) (a), (b), (vii), (viii) (a), (b), (ix), (x), (xi), (xii) (a), (b), (xiii), (xiv) (a), (b), (xv) (a), (b), (xvi) (a), (b), (xvii); VI (a), (b); VII & VIII of the Notification, S.O. 3067(E) dated 01.12.2009 of the Ministry of Environment and Forests, (Published in the Gazette of India, Extraordinary, Part-II, and Section 3, Sub-section (ii), No. 2002] New Delhi, Tuesday, November 1, 2009; an amendment to EC notification S.O.1533(E) dated 14.09.2006

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(III) Environmental Sensitivity

S.No.	Areas	Name/ Identity	Aerial distance (within 15 km.) Proposed project location boundary
1	Areas protected under international conventions, national or local legislation for their ecological, landscape, cultural or other related value		
2	Areas which are important or sensitive for ecological reasons - Wetlands, watercourses or other water bodies, coastal zone, biospheres, mountains, forests		
3	Areas used by protected, important or sensitive species of flora or fauna for breeding, esting, foraging, resting, over wintering, migration		
4	Inland, coastal, marine or underground waters		
5	State, National boundaries		
6	Routes or facilities used by the public for access to recreation or other tourist, pilgrim areas		
7	Defence installations		
8	Densely populated or built-up area		
9	Areas occupied by sensitive man-made land uses (<i>hospitals, schools, places of worship, community facilities</i>)		
10	Areas containing important, high quality or scarce Resources (<i>ground water resources, surface resources, forestry, agriculture, fisheries, tourism, minerals</i>)		
11	Areas already subjected to pollution or environmental damage. (<i>those where existing legal environmental standards are exceeded</i>)		
12	Areas susceptible to natural hazard which could cause the project to present environmental Problems (<i>earthquakes, subsidence, landslides, erosion, Flooding or extreme or adverse climatic conditions</i>)		

I; II; III (i), (ii); IV (a), (b); V (i), (ii), (iii)(a), (b), (c), (iv), (v), (vi) (a), (b), (vii), (viii) (a), (b), (ix), (x), (xi), (xii) (a), (b), (xiii), (xiv) (a), (b), (xv) (a), (b), (xvi) (a), (b), (xvii); VI (a), (b); VII & VIII of the Notification, S.O. 3067(E) dated 01.12.2009 of the Ministry of Environment and Forests, (Published in the Gazette of India, Extraordinary, Part-II, and Section 3, Sub-section (ii), No. 2002] New Delhi, Tuesday, November 1, 2009; an amendment to EC notification S.O.1533(E) dated 14.09.2006

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(IV). Proposed Terms of Reference for EIA studies

^{VI(b)} "I hereby given undertaking that the data and information given in the application and enclosures are true to the best of my knowledge and belief and I am aware that if any part of the data and information submitted is found to be false or misleading at any stage, the project will be rejected and clearance give, if any to the project will be revoked at our risk and cost."

Date: _____

Place: _____

Signature of the applicant
With Name and Full Address
(Project Proponent/Authorised Signatory)

NOTE:

1. The projects involving clearance under Coastal Regulation Zone Notification, 1991 shall submit with the application a C.R.Z. map duly demarcated by one of the authorized agencies, showing the project activities, w.r.t. C.R.Z. (at the stage of TOR) and the recommendations of the State Coastal Zone Management Authority (at the stage of EC). Simultaneous action shall also be taken to obtain the requisite clearance under the provisions of the C.R.Z. Notification, 1991 for the activities to be located in the CRZ.
2. The projects to be located within 10 km of the National Prks, Sancturies, Biosphere Reserves, Migratory Corridors of Wile Animals, the project proponenet shall submit the map duly authenticated by Chief Wildlife Warden showing these features vis-à-vis the project location and the recommendations or comments of the Chief Wildlife Warden thereon (at the stage of EC)."
3. All correspondence with the Ministry of Environment & Forests including submission of application for TOR/Environmental Clearance, subsequent clarifications, as may be required from time to time, participation in the EAC Meeting on behalf of the project proponent shall be made by the authorized signatory only. The authorized signatory should also submit a document in support of his claim of being and authorized signatory for the specific project."

I; II; III (i), (ii); IV (a), (b); V (i), (ii), (iii)(a), (b), (c), (iv), (v), (vi) (a), (b), (vii), (viii) (a), (b), (ix), (x), (xi), (xii) (a), (b), (xiii), (xiv) (a), (b), (xv) (a), (b), (xvi) (a), (b), (xvii); VI (a), (b); VII & VIII of the Notification, S.O. 3067(E) dated 01.12.2009 of the Ministry of Environment and Forests, (Published in the Gazette of India, Extraordinary, Part-II, and Section 3, Sub-section (ii), No. 2002] New Delhi, Tuesday, November 1, 2009; an amendment to EC notification S.O.1533(E) dated 14.09.2006

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APPENDIX II
(See paragraph 6)

FORM-1 A (only for construction projects listed under item 8 of the Schedule)

CHECK LIST OF ENVIRONMENTAL IMPACTS

(Project proponents are required to provide full information and wherever necessary attach explanatory notes with the Form and submit along with proposed environmental management plan & monitoring programme)

1. LAND ENVIRONMENT

(Attach panoramic view of the project site and the vicinity)

- 1.1. Will the existing landuse get significantly altered from the project that is not consistent with the surroundings? (Proposed landuse must conform to the approved Master Plan / Development Plan of the area. Change of landuse if any and the statutory approval from the competent authority be submitted). Attach Maps of (i) site location, (ii) surrounding features of the proposed site (within 500 meters) and (iii) the site (indicating levels & contours) to appropriate scales. If not available attach only conceptual plans.
- 1.2. List out all the major project requirements in terms of the land area, built up area, water consumption, power requirement, connectivity, community facilities, parking needs etc.
- 1.3. What are the likely impacts of the proposed activity on the existing facilities adjacent to the proposed site? (Such as open spaces, community facilities, details of the existing landuse, disturbance to the local ecology).
- 1.4. Will there be any significant land disturbance resulting in erosion, subsidence & instability? (Details of soil type, slope analysis, vulnerability to subsidence, seismicity etc may be given).
- 1.5. Will the proposal involve alteration of natural drainage systems? (Give details on a contour map showing the natural drainage near the proposed project site)
- 1.6. What are the quantities of earthwork involved in the construction activity-cutting, filling, reclamation etc. (Give details of the quantities of earthwork involved, transport of fill materials from outside the site etc.)

I; II; III (i), (ii); IV (a), (b); V (i), (ii), (iii)(a), (b), (c), (iv), (v), (vi) (a), (b), (vii), (viii) (a), (b), (ix), (x), (xi), (xii) (a), (b), (xiii), (xiv) (a), (b), (xv) (a), (b), (xvi) (a), (b), (xvii); VI (a), (b); VII & VIII of the Notification, S.O. 3067(E) dated 01.12.2009 of the Ministry of Environment and Forests, (Published in the Gazette of India, Extraordinary, Part-II, and Section 3, Sub-section (ii), No. 2002] New Delhi, Tuesday, November 1, 2009; an amendment to EC notification S.O.1533(E) dated 14.09.2006

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- 1.7. Give details regarding water supply, waste handling etc during the construction period.
- 1.8. Will the low lying areas & wetlands get altered? (Provide details of how low lying and wetlands are getting modified from the proposed activity)
- 1.9. Whether construction debris & waste during construction cause health hazard? (Give quantities of various types of wastes generated during construction including the construction labour and the means of disposal)

2. WATER ENVIRONMENT

- 2.1. Give the total quantity of water requirement for the proposed project with the breakup of requirements for various uses. How will the water requirement met? State the sources & quantities and furnish a water balance statement.
- 2.2. What is the capacity (dependable flow or yield) of the proposed source of water?
- 2.3. What is the quality of water required, in case, the supply is not from a municipal source? (Provide physical, chemical, biological characteristics with class of water quality)
- 2.4. How much of the water requirement can be met from the recycling of treated wastewater? (Give the details of quantities, sources and usage)
- 2.5. Will there be diversion of water from other users? (Please assess the impacts of the project on other existing uses and quantities of consumption)
- 2.6. What is the incremental pollution load from wastewater generated from the proposed activity? (Give details of the quantities and composition of wastewater generated from the proposed activity)
- 2.7. Give details of the water requirements met from water harvesting? Furnish details of the facilities created.
- 2.8. What would be the impact of the land use changes occurring due to the proposed project on the runoff characteristics (quantitative as well as qualitative) of the area in the post construction phase on a long term basis? Would it aggravate the problems of flooding or water logging in any way?

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- 2.9. What are the impacts of the proposal on the ground water? (Will there be tapping of ground water; give the details of ground water table, recharging capacity, and approvals obtained from competent authority, if any)
- 2.10. What precautions/measures are taken to prevent the run-off from construction activities polluting land & aquifers? (Give details of quantities and the measures taken to avoid the adverse impacts)
- 2.11. How is the storm water from within the site managed?(State the provisions made to avoid flooding of the area, details of the drainage facilities provided along with a site layout indication contour levels)
- 2.12. Will the deployment of construction labourers particularly in the peak period lead to unsanitary conditions around the project site (Justify with proper explanation)
- 2.13. What on-site facilities are provided for the collection, treatment & safe disposal of sewage? (Give details of the quantities of wastewater generation, treatment capacities with technology & facilities for recycling and disposal)
- 2.14. Give details of dual plumbing system if treated waste used is used for flushing of toilets or any other use.

3. VEGETATION

- 3.1. Is there any threat of the project to the biodiversity? (Give a description of the local ecosystem with it's unique features, if any)
- 3.2. Will the construction involve extensive clearing or modification of vegetation? (Provide a detailed account of the trees & vegetation affected by the project)
- 3.3. What are the measures proposed to be taken to minimize the likely impacts on important site features (Give details of proposal for tree plantation, landscaping, creation of water bodies etc along with a layout plan to an appropriate scale)

4. FAUNA

- 4.1. Is there likely to be any displacement of fauna- both terrestrial and aquatic or creation of barriers for their movement? Provide the details.

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- 4.2. Any direct or indirect impacts on the avifauna of the area? Provide details.
- 4.3. Prescribe measures such as corridors, fish ladders etc to mitigate adverse impacts on fauna

5. AIR ENVIRONMENT

- 5.1. Will the project increase atmospheric concentration of gases & result in heat islands? (Give details of background air quality levels with predicted values based on dispersion models taking into account the increased traffic generation as a result of the proposed constructions)
- 5.2. What are the impacts on generation of dust, smoke, odorous fumes or other hazardous gases? Give details in relation to all the meteorological parameters.
- 5.3. Will the proposal create shortage of parking space for vehicles? Furnish details of the present level of transport infrastructure and measures proposed for improvement including the traffic management at the entry & exit to the project site.
- 5.4. Provide details of the movement patterns with internal roads, bicycle tracks, pedestrian pathways, footpaths etc., with areas under each category.
- 5.5. Will there be significant increase in traffic noise & vibrations? Give details of the sources and the measures proposed for mitigation of the above.
- 5.6. What will be the impact of DG sets & other equipment on noise levels & vibration in & ambient air quality around the project site? Provide details.

6. AESTHETICS

- 6.1. Will the proposed constructions in any way result in the obstruction of a view, scenic amenity or landscapes? Are these considerations taken into account by the proponents?
- 6.2. Will there be any adverse impacts from new constructions on the existing structures? What are the considerations taken into account?
- 6.3. Whether there are any local considerations of urban form & urban design influencing the design criteria? They may be explicitly spelt out.
- 6.4. Are there any anthropological or archaeological sites or artefacts nearby? State if any other significant features in the vicinity of the proposed site have been considered.

7. SOCIO-ECONOMIC ASPECTS

- 7.1. Will the proposal result in any changes to the demographic structure of local population? Provide the details.

I; II; III (i), (ii); IV (a), (b); V (i), (ii), (iii)(a), (b), (c), (iv), (v), (vi) (a), (b), (vii), (viii) (a), (b), (ix), (x), (xi), (xii) (a), (b), (xiii), (xiv) (a), (b), (xv) (a), (b), (xvi) (a), (b), (xvii); VI (a), (b); VII & VIII of the Notification, S.O. 3067(E) dated 01.12.2009 of the Ministry of Environment and Forests, (Published in the Gazette of India, Extraordinary, Part-II, and Section 3, Sub-section (ii), No. 2002] New Delhi, Tuesday, November 1, 2009; an amendment to EC notification S.O.1533(E) dated 14.09.2006

- 7.2. Give details of the existing social infrastructure around the proposed project.
- 7.3. Will the project cause adverse effects on local communities, disturbance to sacred sites or other cultural values? What are the safeguards proposed?

8. BUILDING MATERIALS

- 8.1. May involve the use of building materials with high-embodied energy. Are the construction materials produced with energy efficient processes? (Give details of energy conservation measures in the selection of building materials and their energy efficiency)
- 8.2. Transport and handling of materials during construction may result in pollution, noise & public nuisance. What measures are taken to minimize the impacts?
- 8.3. Are recycled materials used in roads and structures? State the extent of savings achieved?
- 8.4. Give details of the methods of collection, segregation & disposal of the garbage generated during the operation phases of the project.

9. ENERGY CONSERVATION

- 9.1. Give details of the power requirements, source of supply, backup source etc. What is the energy consumption assumed per square foot of built-up area? How have you tried to minimize energy consumption?
- 9.2. What type of, and capacity of, power back-up to you plan to provide?
- 9.3. What are the characteristics of the glass you plan to use? Provide specifications of its characteristics related to both short wave and long wave radiation?
- 9.4. What passive solar architectural features are being used in the building? Illustrate the applications made in the proposed project.
- 9.5. Does the layout of streets & buildings maximise the potential for solar energy devices? Have you considered the use of street lighting, emergency lighting and solar hot water systems for use in the building complex? Substantiate with details.
- 9.6. Is shading effectively used to reduce cooling/heating loads? What principles have been used to maximize the shading of Walls on the East and the West and the Roof? How much energy saving has been effected?
- 9.7. Do the structures use energy-efficient space conditioning, lighting and mechanical systems? Provide technical details. Provide details of the transformers and motor efficiencies, lighting intensity and air-conditioning load assumptions? Are you using CFC and HCFC free chillers? Provide specifications.
- 9.8. What are the likely effects of the building activity in altering the micro-climates? Provide a self assessment on the likely impacts of the proposed construction on

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creation of heat island & inversion effects?

- 9.9. What are the thermal characteristics of the building envelope? (a) roof; (b) external walls; and (c) fenestration? Give details of the material used and the U-values or the R values of the individual components.
- 9.10. What precautions & safety measures are proposed against fire hazards? Furnish details of emergency plans.
- 9.11. If you are using glass as wall material provides details and specifications including emissivity and thermal characteristics.
- 9.12. What is the rate of air infiltration into the building? Provide details of how you are mitigating the effects of infiltration.
- 9.13. To what extent the non-conventional energy technologies are utilised in the overall energy consumption? Provide details of the renewable energy technologies used.

10. Environment Management Plan

The Environment Management Plan would consist of all mitigation measures for each item wise activity to be undertaken during the construction, operation and the entire life cycle to minimize adverse environmental impacts as a result of the activities of the project. It would also delineate the environmental monitoring plan for compliance of various environmental regulations. It will state the steps to be taken in case of emergency such as accidents at the site including fire.

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APPENDIX III

(See paragraph 7

GENERIC STRUCTURE OF ENVIRONMENTAL IMPACT ASSESMENT DOCUMENT

S.NO	EIA STRUCTURE	CONTENTS
1.	Introduction	<ul style="list-style-type: none"> • Purpose of the report • Identification of project & project proponent • Brief description of nature, size, location of the project and its importance to the country, region • Scope of the study – details of regulatory scoping carried out (As per Terms of Reference)
2.	Project Description	<ul style="list-style-type: none"> • Condensed description of those aspects of the project (based on project feasibility study), likely to cause environmental effects. Details should be provided to give clear picture of the following: <ul style="list-style-type: none"> • Type of project • Need for the project • Location (maps showing general location, specific location, project boundary & project site layout) • Size or magnitude of operation (incl. Associated activities required by or for the project) • Proposed schedule for approval and implementation • Technology and process description • Project description. Including drawings showing project layout, components of project etc. Schematic representations of the feasibility drawings which give information important for EIA purpose • Description of mitigation measures incorporated into the project to meet environmental standards, environmental operating conditions, or other EIA requirements (as required by the scope) • Assessment of New & untested technology for the risk of technological failure

I; II; III (i), (ii); IV (a), (b); V (i), (ii), (iii)(a), (b), (c), (iv), (v), (vi) (a), (b), (vii), (viii) (a), (b), (ix), (x), (xi), (xii) (a), (b), (xiii), (xiv) (a), (b), (xv) (a), (b), (xvi) (a), (b), (xvii); VI (a), (b); VII & VIII of the Notification, S.O. 3067(E) dated 01.12.2009 of the Ministry of Environment and Forests, (Published in the Gazette of India, Extraordinary, Part-II, and Section 3, Sub-section (ii), No. 2002] New Delhi, Tuesday, November 1, 2009; an amendment to EC notification S.O.1533(E) dated 14.09.2006

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3.	Description of the Environment	<ul style="list-style-type: none"> • Study area, period, components & methodology • Establishment of baseline for valued environmental components, as identified in the scope • Base maps of all environmental components
4.	Anticipated Environmental Impacts & Mitigation Measures	<ul style="list-style-type: none"> • Details of Investigated Environmental impacts due to project location, possible accidents, project design, project construction, regular operations, final decommissioning or rehabilitation of a completed project • Measures for minimizing and / or offsetting adverse impacts identified • Irreversible and Irretrievable commitments of environmental components • Assessment of significance of impacts (Criteria for determining significance, Assigning significance) • Mitigation measures
5.	Analysis of Alternatives (Technology & Site)	<ul style="list-style-type: none"> • In case, the scoping exercise results in need for alternatives: • Description of each alternative • Summary of adverse impacts of each alternative • Mitigation measures proposed for each alternative and • Selection of alternative
6.	Environmental Monitoring Program	<ul style="list-style-type: none"> • Technical aspects of monitoring the effectiveness of mitigation measures (incl. Measurement methodologies, frequency, location, data analysis, reporting schedules, emergency procedures, detailed budget & procurement schedules)
7.	Additional Studies	<ul style="list-style-type: none"> • Public Consultation • Risk assessment • Social Impact Assessment. R&R Action Plans
8.	Project Benefits	<ul style="list-style-type: none"> • Improvements in the physical infrastructure • Improvements in the social infrastructure

I; II; III (i), (ii); IV (a), (b); V (i), (ii), (iii)(a), (b), (c), (iv), (v), (vi) (a), (b), (vii), (viii) (a), (b), (ix), (x), (xi), (xii) (a), (b), (xiii), (xiv) (a), (b), (xv) (a), (b), (xvi) (a), (b), (xvii); VI (a), (b); VII & VIII of the Notification, S.O. 3067(E) dated 01.12.2009 of the Ministry of Environment and Forests, (Published in the Gazette of India, Extraordinary, Part-II, and Section 3, Sub-section (ii), No. 2002] New Delhi, Tuesday, November 1, 2009; an amendment to EC notification S.O.1533(E) dated 14.09.2006

		<ul style="list-style-type: none"> • Employment potential –skilled; semi-skilled and unskilled • Other tangible benefits
9.	Environmental Cost Benefit Analysis	If recommended at the Scoping stage
10.	EMP	<ul style="list-style-type: none"> • Description of the administrative aspects of ensuring that mitigative measures are implemented and their effectiveness monitored, after approval of the EIA
11	Summary & Conclusion (This will constitute the summary of the EIA Report)	<ul style="list-style-type: none"> • Overall justification for implementation of the project • Explanation of how, adverse effects have been mitigated
12.	Disclosure of Consultants engaged	<ul style="list-style-type: none"> • The names of the Consultants engaged with their brief resume and nature of Consultancy rendered

APPENDIX III A

(See paragraph 7)

CONTENTS OF SUMMARY ENVIRONMENTAL IMPACT ASSESSMENT

The Summary EIA shall be a summary of the full EIA Report condensed to ten A-4 size pages at the maximum. It should necessarily cover in brief the following Chapters of the full EIA Report: -

1. Project Description
2. Description of the Environment
3. Anticipated Environmental impacts and mitigation measures
4. Environmental Monitoring Programme
5. Additional Studies
6. Project Benefits
7. Environment Management Plan

I; II; III (i), (ii); IV (a), (b); V (i), (ii), (iii)(a), (b), (c), (iv), (v), (vi) (a), (b), (vii), (viii) (a), (b), (ix), (x), (xi), (xii) (a), (b), (xiii), (xiv) (a), (b), (xv) (a), (b), (xvi) (a), (b), (xvii); VI (a), (b); VII & VIII of the Notification, S.O. 3067(E) dated 01.12.2009 of the Ministry of Environment and Forests, (Published in the Gazette of India, Extraordinary, Part-II, and Section 3, Sub-section (ii), No. 2002] New Delhi, Tuesday, November 1, 2009; an amendment to EC notification S.O.1533(E) dated 14.09.2006

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APPENDIX IV**(See paragraph 7)****PROCEDURE FOR CONDUCT OF PUBLIC HEARING**

1.0 The Public Hearing shall be arranged in a systematic, time bound and transparent manner ensuring widest possible public participation at the project site(s) or in its close proximity District -wise, by the concerned State Pollution Control Board (SPCB) or the Union Territory Pollution Control Committee (UTPCC).

2.0 The Process:

2.1 The Applicant shall make a request through a simple letter to the Member Secretary of the SPCB or Union Territory Pollution Control Committee, in whose jurisdiction the project is located, to arrange the public hearing within the prescribed statutory period. In case the project site is covering more than one District or State or Union Territory, the public hearing is mandated in each District, State or Union Territory in which the project is located and the applicant shall make separate requests to each concerned SPCB or UTPCC for holding the public hearing as per this procedure.

2.2 The Applicant shall enclose with the letter of request, at least 10 hard copies and an equivalent number of soft (electronic) copies of the draft EIA Report with the generic structure given in Appendix III including the Summary Environment Impact Assessment report in English and in the official language of the state/local language, prepared strictly in accordance with the Terms of Reference communicated after Scoping (Stage-2). Simultaneously the applicant shall arrange to forward copies, one hard and one soft, of the above draft EIA Report along with the Summary EIA report to the following authorities or offices, within whose jurisdiction the project will be located:

- (a) District Magistrate/District collector/Deputy commissioner/s
- (b) Zila Parishad or Municipal Corporation or Panchayats Union
- (c) District Industries Office
- (d) Urban Local Bodies (ULBs) / PRIs Concerned / Development authorities.
- (d) Concerned Regional Office of the Ministry of Environment and Forests

2.3 On receiving the draft Environmental Impact Assessment report, the abovementioned authorities except the Regional Office of MoEF, shall arrange to widely publicize it within their respective jurisdictions requesting the interested persons to send their comments to the concerned regulatory authorities. They shall also make available the draft EIA Report for inspection electronically or otherwise to the public during normal office hours till the Public Hearing is over.

2.4 The SPCB or UTPCC concerned shall also make similar arrangements for giving publicity about the project within the State/Union Territory and make available the Summary of the draft Environmental Impact Assessment report (Appendix III A) for

I; II; III (i), (ii); IV (a), (b); V (i), (ii), (iii)(a), (b), (c), (iv), (v), (vi) (a), (b), (vii), (viii) (a), (b), (ix), (x), (xi), (xii) (a), (b), (xiii), (xiv) (a), (b), (xv) (a), (b), (xvi) (a), (b), (xvii); VI (a), (b); VII & VIII of the Notification, S.O. 3067(E) dated 01.12.2009 of the Ministry of Environment and Forests, (Published in the Gazette of India, Extraordinary, Part-II, and Section 3, Sub-section (ii), No. 2002] New Delhi, Tuesday, November 1, 2009; an amendment to EC notification S.O.1533(E) dated 14.09.2006

inspection in select offices or public libraries or any other suitable location etc. They shall also additionally make available a copy of the draft Environmental Impact Assessment report to the above five authorities/offices as given in para 2.2.

3.0 Notice of Public Hearing:

3.1 The Member-Secretary of the concerned SPCB or UTPCC shall finalize the date, time and exact venue for the conduct of public hearing within 7(seven) days of the date of receipt of the draft Environmental Impact Assessment report from the project proponent, and advertise the same in one major National Daily and one Regional vernacular Daily / Official State Language. A minimum notice period of 30(thirty) days shall be provided to the public for furnishing their responses;

3.2 The advertisement shall also inform the public about the places or offices where the public could access the draft Environmental Impact Assessment report and the Summary Environmental Impact Assessment report before the public hearing. In places where the newspapers do not reach, the Competent Authority should arrange to inform the local public about the public hearing by other means such as by way of beating of drums as well as advertisement / announcement on radio / television.

3.3 No postponement of the date, time, venue of the public hearing shall be undertaken, unless some untoward emergency situation occurs and then only on the recommendation of the concerned District Magistrate/District collector/Deputy Commissioner, the postponement shall be notified to the public through the same National and Regional vernacular dailies and also prominently displayed at all the identified offices by the concerned SPCB or Union Territory Pollution Control Committee;

3.4 In the above exceptional circumstances, fresh date, time and venue for the public consultation shall be decided by the Member – Secretary of the concerned SPCB or UTPCC only in consultation with the District Magistrate/District collector/Deputy Commissioner and notified afresh as per procedure under 3.1 above.

4.0 Supervision and Presiding over the Hearing:

4.1 The District Magistrate/District collector/Deputy Commissioner or his or her representative not below the rank of an Additional District Magistrate assisted by a representative of SPCB or UTPCC, shall Supervise and preside over the entire public hearing process.

5.0 Videography

5.1 The SPCB or UTPCC shall arrange to video film the entire proceedings. A copy of the videotape or a CD shall be enclosed with the public hearing proceedings while Forwarding it to the Regulatory Authority concerned.

6.0 Proceedings

6.1 The attendance of all those who are present at the venue shall be noted and annexed with the final proceedings.

I; II; III (i), (ii); IV (a), (b); V (i), (ii), (iii)(a), (b), (c), (iv), (v), (vi) (a), (b), (vii), (viii) (a), (b), (ix), (x), (xi), (xii) (a), (b), (xiii), (xiv) (a), (b), (xv) (a), (b), (xvi) (a), (b), (xvii); VI (a), (b); VII & VIII of the Notification, S.O. 3067(E) dated 01.12.2009 of the Ministry of Environment and Forests, (Published in the Gazette of India, Extraordinary, Part-II, and Section 3, Sub-section (ii), No. 2002] New Delhi, Tuesday, November 1, 2009; an amendment to EC notification S.O.1533(E) dated 14.09.2006

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- 6.2 There shall be no quorum required for attendance for starting the proceedings.
- 6.3 A representative of the applicant shall initiate the proceedings with a presentation on the project and the Summary EIA report.
- 6.4 Persons present at the venue shall be granted the opportunity to seek information or clarifications on the project from the Applicant. The summary of the public hearing proceedings accurately reflecting all the views and concerns expressed shall be recorded by the representative of the SPCB or UTPCC and read over to the audience at the end of the proceedings explaining the contents in the local/vernacular language and the agreed minutes shall be signed by the District Magistrate/District collector/Deputy Commissioner or his or her representative on the same day and forwarded to the SPCB/UTPCC concerned.
- 6.5 A Statement of the issues raised by the public and the comments of the Applicant shall also be prepared in the local language or the Official State language, as the case may be, and in English and annexed to the proceedings:
- 6.6 The proceedings of the public hearing shall be conspicuously displayed at the office of the Panchyats within whose jurisdiction the project is located, office of the concerned Zila Parishad, District Magistrate/District collector/Deputy Commissioner, and the SPCB or UTPCC . The SPCB or UTPCC shall also display the proceedings on its website for general information. Comments, if any, on the proceedings which may be sent directly to the concerned regulatory authorities and the applicant concerned.
- 7.0 Time period for completion of public hearing**
- 7.1 The public hearing shall be completed within a period of 45 (forty five) days from date of receipt of the request letter from the Applicant. Thereafter the SPCB or UTPCC concerned shall sent the public hearing proceedings to the concerned regulatory authority within 8(eight) days of the completion of the public hearing.Simultaneously, a copy will also be provided to the project proponent.The applicant may also directly forward a copy of the approved public hearing proceedings to the regulatory authority concerned along with the final Environmental Impact Assessment report or supplementary report to the draft EIA report prepared after the public hearing and public consultations incorporating the concerns expressed in the public hearing along with action plan and financial allocation, item-wise, to address those concerns."
- 7.2 If the SPCB or UTPCC fails to hold the public hearing within the stipulated 45(forty five) days, the Central Government in Ministry of Environment and Forests for Category 'A' project or activity and the State Government or Union Territory Administration for Category 'B' project or activity at the request of the SEIAA, shall engage any other agency or authority to complete the process, as per procedure laid down in this notification.

APPENDIX –V

I; II; III (i), (ii); IV (a), (b); V (i), (ii), (iii)(a), (b), (c), (iv), (v), (vi) (a), (b), (vii), (viii) (a), (b), (ix), (x), (xi), (xii) (a), (b) . (xiii), (xiv) (a), (b), (xv) (a), (b), (xvi) (a), (b), (xvii); VI (a), (b); VII & VIII of the Notification, S.O. 3067(E) dated 01.12.2009 of the Ministry of Environment and Forests, (Published in the Gazette of India, Extraordinary, Part-II, and Section 3, Sub-section (ii), No. 2002] New Delhi, Tuesday, November 1, 2009; an amendment to EC notification S.O.1533(E) dated 14.09.2006

(See paragraph 7)

PROCEDURE PRESCRIBED FOR APPRAISAL

1. The applicant shall apply to the concerned regulatory authority through a simple communication enclosing the following documents where public consultations are mandatory:
 - Final Environment Impact Assessment Report [20(twenty) hard copies and 1 (one) soft copy]
 - A copy of the video tape or CD of the public hearing proceedings
 - A copy of final layout plan (20 copies)
 - A copy of the project feasibility report (1 copy)
2. The Final EIA Report and the other relevant documents submitted by the applicant shall be scrutinized in office within 30 days from the date of its receipt by the concerned Regulatory Authority strictly with reference to the TOR and the inadequacies noted shall be communicated electronically or otherwise in a single set to the Members of the EAC /SEAC enclosing a copy each of the Final EIA Report including the public hearing proceedings and other public responses received along with a copy of Form -1or Form 1A and scheduled date of the EAC /SEAC meeting for considering the proposal.
3. Where a public consultation is not mandatory, the appraisal shall be made on the basis of the prescribed application Form 1 and EIA report, in the case of all projects and activities other than Item 8 of the Schedule. In the case of Item 8 of the Schedule, considering its unique project cycle, the EAC or SEAC concerned shall appraise all Category B projects or activities on the basis of Form 1, Form 1A and the conceptual plan and make recommendations on the project regarding grant of environmental clearance or otherwise and also stipulate the conditions for environmental clearance."
4. Every application shall be placed before the EAC/SEAC and its appraisal completed within 60 days of its receipt with requisite documents / details in the prescribed manner.
5. The applicant shall be informed at least 15 (fifteen) days prior to the scheduled date of the EAC /SEAC meeting for considering the project proposal.
6. The minutes of the EAC /SEAC meeting shall be finalised within 5 working days of the meeting and displayed on the website of the concerned regulatory authority. In case the project or activity is recommended for grant of EC, then the minutes shall clearly list out the specific environmental safeguards and conditions. In case the recommendations are for rejection, the reasons for the same shall also be explicitly stated.

Note: The principal rules were published in the Gazette of India, Extraordinary, Part II, Section 3, Sub-section (ii) vide notification number S.O. 1533 (E), dated 14th September, 2006 and amended vide S.O. 1737 (E), dated the 11th October, 2007.

APPENDIX VI

(See paragraph 5)

I; II; III (i), (ii); IV (a), (b); V (i), (ii), (iii)(a), (b), (c), (iv), (v), (vi) (a), (b), (vii), (viii) (a), (b), (ix), (x), (xi), (xii) (a), (b), (xiii), (xiv) (a), (b), (xv) (a), (b), (xvi) (a), (b), (xvii); VI (a), (b); VII & VIII of the Notification, S.O. 3067(E) dated 01.12.2009 of the Ministry of Environment and Forests, (Published in the Gazette of India, Extraordinary, Part-II, and Section 3, Sub-section (ii), No. 2002] New Delhi, Tuesday, November 1, 2009; an amendment to EC notification S.O.1533(E) dated 14.09.2006

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COMPOSITION OF THE SECTOR/ PROJECT SPECIFIC EXPERT APPRAISAL COMMITTEE (EAC) FOR CATEGORY A PROJECTS AND THE STATE/UT LEVEL EXPERT APPRAISAL COMMITTEES (SEACs) FOR CATEGORY B PROJECTS TO BE CONSTITUTED BY THE CENTRAL GOVERNMENT

1. The Expert Appraisal Committees (EAC(s) and the State/UT Level Expert Appraisal Committees (SEACs) shall consist of only professionals and experts fulfilling the following eligibility criteria:

Professional: The person should have at least (i) 5 years of formal University training in the concerned discipline leading to a MA/MSc Degree, or (ii) in case of Engineering /Technology/Architecture disciplines, 4 years formal training in a professional training course together with prescribed practical training in the field leading to a B.Tech/B.E./B.Arch. Degree, or (iii) Other professional degree (e.g. Law) involving a total of 5 years of formal University training and prescribed practical training, or (iv) Prescribed apprenticeship/article ship and pass examinations conducted by the concerned professional association (e.g. Chartered Accountancy),or (v) a University degree , followed by 2 years of formal training in a University or Service Academy (e.g. MBA/IAS/IFS). In selecting the individual professionals, experience gained by them in their respective fields will be taken note of.

Expert: A professional fulfilling the above eligibility criteria with at least 15 years of relevant experience in the field, or with an advanced degree (e.g. Ph.D.) in a concerned field and at least 10 years of relevant experience.

Age: Below 70 years. However, in the event of the non-availability of /paucity of experts in a given field, the maximum age of a member of the Expert Appraisal Committee may be allowed up to 75 years

2. The Members of the EAC shall be Experts with the requisite expertise and experience in the following fields /disciplines. In the event that persons fulfilling the criteria of "Experts" are not available, Professionals in the same field with sufficient experience may be considered:

- **Environment Quality Experts:** Experts in measurement/monitoring, analysis and interpretation of data in relation to environmental quality
- **Sectoral Experts in Project Management:** Experts in Project Management or Management of Process/Operations/Facilities in the relevant sectors.
- **Environmental Impact Assessment Process Experts:** Experts in conducting and carrying out Environmental Impact Assessments (EIAs) and preparation of Environmental Management Plans (EMPs) and other Management plans and who have wide expertise and knowledge of predictive techniques and tools used in the EIA process
- **Risk Assessment Experts**
- **Life Science Experts in floral and faunal management**
- **Forestry and Wildlife Experts**

I; II; III (i), (ii); IV (a), (b); V (i), (ii), (iii)(a), (b), (c), (iv), (v), (vi) (a), (b), (vii), (viii) (a), (b), (ix), (x), (xi), (xii) (a), (b), (xiii), (xiv) (a), (b), (xv) (a), (b), (xvi) (a), (b), (xvii); VI (a), (b); VII & VIII of the Notification, S.O. 3067(E) dated 01.12.2009 of the Ministry of Environment and Forests, (Published in the Gazette of India, Extraordinary, Part-II, and Section 3, Sub-section (ii), No. 2002] New Delhi, Tuesday, November 1, 2009; an amendment to EC notification S.O.1533(E) dated 14.09.2006

- **Environmental Economics Expert with experience in project appraisal**
- 3. The Membership of the EAC shall not exceed 15 (fifteen) regular Members. However the Chairperson may co-opt an expert as a Member in a relevant field for a particular meeting of the Committee.
- 4. The Chairperson shall be an outstanding and experienced environmental policy expert or expert in management or public administration with wide experience in the relevant development sector.
- 5. The Chairperson shall nominate one of the Members as the Vice Chairperson who shall
preside over the EAC in the absence of the Chairman /Chairperson.
- 6. A representative of the Ministry of Environment and Forests shall assist the Committee as its Secretary.
- 7. The maximum tenure of a Member, including Chairperson, shall be for 2 (two) terms of 3 (three) years each.
- 8. The Chairman / Members may not be removed prior to expiry of the tenure without cause and proper enquiry.



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I; II; III (i), (ii); IV (a), (b); V (i), (ii), (iii)(a), (b), (c), (iv), (v), (vi) (a), (b), (vii), (viii) (a), (b), (ix), (x), (xi), (xii) (a), (b), (xiii), (xiv) (a), (b), (xv) (a), (b), (xvi) (a), (b), (xvii); VI (a), (b); VII & VIII of the Notification, S.O. 3067(E) dated 01.12.2009 of the Ministry of Environment and Forests, (Published in the Gazette of India, Extraordinary, Part-II, and Section 3, Sub-section (ii), No. 2002] New Delhi, Tuesday, November 1, 2009; an amendment to EC notification S.O.1533(E) dated 14.09.2006

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Annexure - R/2

रजिस्ट्री सं० डी० एल०-33004/99

REGD. NO. D. L.-33004/99



भारत का राजपत्र The Gazette of India

असाधारण

EXTRAORDINARY

भाग II—खण्ड 3—उप-खण्ड (ii)

PART II—Section 3—Sub-section (ii)

प्राधिकार से प्रकाशित

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नई दिल्ली, बृहस्पतिवार, अप्रैल 30, 2015/वैशाख 10, 1937

No. 887]

NEW DELHI, THURSDAY, APRIL 30, 2015 /VAISAKHA 10, 1937

पर्यावरण, वन और जलवायु परिवर्तन मंत्रालय

अधिसूचना

नई दिल्ली, 17 अप्रैल, 2015

का.आ. 1142(अ).— केन्द्रीय सरकार, पर्यावरण (संरक्षण) नियम, 1986 के नियम 5 के उपनियम (4) के साथ पठित पर्यावरण (संरक्षण) अधिनियम, 1986 (1986 का 29) की धारा 3 की उपधारा (1) और धारा 3 की उपधारा (2) के खंड (v) द्वारा प्रदत्त शक्तियों का प्रयोग करते हुए, लोक हित में उक्त नियम के नियम 5 के उपनियम (3) के खंड (क) के अधीन सूचना की आवश्यकता से छूट के पश्चात्, भारत सरकार के पर्यावरण और वन मंत्रालय की अधिसूचना संख्यांक का.आ. 1533(अ), तारीख 14 सितंबर, 2006 का निम्नलिखित और संशोधन करती है, अर्थात्:--

उक्त अधिसूचना की अनुसूची में मद 7(घ) और उससे संबंधित प्रविष्टियों के पश्चात् निम्नलिखित मद और प्रविष्टियां अंतःस्थापित की जाएगी, अर्थात्:--

(1)	(2)	(3)	(4)	(5)
"7(घ)(क)	जैव-चिकित्सा (बायो-मैडिकल) अपशिष्ट उपचार सुविधाएं		सभी परियोजनाएं	

[फा.सं.3-9/2014-आईए.III]

मनोज कुमार सिंह, संयुक्त सचिव

टिप्पण: मूल नियम भारत के राजपत्र, असाधारण, भाग 2, खंड 3, उपखंड (ii) में अधिसूचना सं.का.आ.1533(अ), तारीख 14 सितंबर, 2006 द्वारा प्रकाशित किए गए थे और निम्नानुसार पश्चात्तवर्ती संशोधन किए गए :-

1. का.आ.1737(अ), तारीख 11 अक्टूबर, 2007;
2. का.आ.3067(अ), तारीख 1 दिसंबर, 2009;
3. का.आ.695(अ), तारीख 4 अप्रैल, 2011;
4. का.आ.2893(अ), तारीख 13 दिसंबर, 2012;

5. का.आ.674(अ), तारीख 13 मार्च, 2013;
6. का.आ.2559(अ), तारीख 22 अगस्त, 2013;
7. का.आ.2731(अ), तारीख 9 सितंबर, 2013;
8. का.आ.562(अ), तारीख 26 फरवरी, 2014
9. का.आ.637(अ), तारीख 28 फरवरी, 2014;
10. का.आ.1599(अ), तारीख 25 जून, 2014;
11. का.आ.2601(अ), तारीख 7 अक्टूबर, 2014;
12. का.आ.3252(अ), तारीख 22 दिसंबर, 2014;
13. का.आ.382(अ), तारीख 3 फरवरी, 2015;
14. का.आ.811(अ), तारीख 23 मार्च, 2015; और
15. का.आ.996(अ), तारीख 10 अप्रैल, 2015।

MINISTRY OF ENVIRONMENT AND FORESTS

NOTIFICATION

New Delhi, the 17th April, 2015

S.O.1142(E).— In exercise of the powers conferred by sub-section (1) and clause (v) of sub-section (2) of section 3 of the Environment (Protection) Act, 1986(29 of 1986) read with sub-rule(4) of rule 5 of the Environment (Protection) Rules, 1986, the Central Government hereby makes the following further amendments to the notification of the Government of India, in the Ministry of Environment and Forests number S.O.1533(E), dated the 14th September, 2006 after dispensed with the requirement of notice under clause(a) of sub-rule(3) of the said rule 5 in public interest, namely:—

In the said notification, in the Schedule, after item 7(d) and the entries relating thereto, the following item and entries shall be inserted, namely:—

(1)	(2)	(3)	(4)	(5)
"7(da)	Bio-Medical Waste Treatment Facilities	-	All projects	-

[F. No. 3-9/2014-IA.III]

MANOJ KUMAR SINGH, Jt. Secy.

Note:- The principal rules were published in the Gazette of India, Extraordinary, Part II, Section 3, Sub-section (ii) vide notification number S.O. 1533 (E), dated the 14th September, 2006 and subsequently amended as follows:-

1. S.O.1737(E) dated the 11th October, 2007
2. S.O. 3067(E) dated the 1st December, 2009
3. S.O.695(E) dated the 4th April, 2011
4. S.O.2896(E) dated the 13th December, 2012
5. S.O.674(E) dated the 13th March, 2013
6. S.O.2559(E) dated the 22nd August, 2013
7. S.O. 2731(E) dated the 9th September, 2013
8. S.O. 562(E) dated the 26th February, 2014
9. S.O.637(E) dated the 28th February, 2014
10. S.O. 1599(E) dated the 25th June, 2014
11. S.O. 2601 (E) dated 7th October, 2014
12. S.O. 3252(E) dated 22nd December, 2014
13. S.O. 382 (E) dated 3rd February, 2015
14. S.O. 811(E) dated 23rd March, 2015
15. S.O. 996(E) dated 10th April, 2015.



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Govt. of India, New Delhi



भारत का राजपत्र

The Gazette of India

असाधारण

EXTRAORDINARY

भाग II—खण्ड 3—उप-खण्ड (ii)

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पर्यावरण और वन मंत्रालय

अधिमूचना

नई दिल्ली, 28 फरवरी, 2014

का.आ. 637(अ).—केंद्रीय सरकार, पर्यावरण (संरक्षण) अधिनियम, 1986 (1986 का 29) की धारा 23 द्वारा प्रदत्त शक्तियों का प्रयोग करते हुए उक्त अधिनियम की धारा 5 के अधीन इसमें निहित शक्तियों को पर्यावरण (संरक्षण) अधिनियम, 1986 की धारा 3 की उप-धारा (3) के अधीन केंद्रीय सरकार द्वारा गठित किए गए सभी राज्य और संघराज्यक्षेत्र पर्यावरण समाघात प्राधिकरणों (जिन्हें इसमें इसके पश्चात् उक्त प्राधिकरण कहा गया है) को उक्त प्राधिकरणों द्वारा अपनी अधिकारिता के भीतर परियोजनाओं या क्रिया कलाओं को जारी पर्यावरण अनापत्तियों की शर्तों के अतिक्रमण की दशा में परियोजना प्रस्तावकों को कारण बताओ नोटिस जारी करने तथा इस शर्त के अधीन कि केंद्रीय सरकार शक्तियों के ऐसे प्रत्यायोजन का प्रतिसंहरण कर सकेगी या उक्त अधिनियम की धारा 5 के उपबंधों को स्वयं अवलंब ले सकेगी, यदि केंद्रीय सरकार की राय में लोक हित में ऐसी कार्यवाही आवश्यक है, यदि अपेक्षित हो तो अतिक्रमणों के लिए उक्त परियोजना प्रस्तावकों को ऐसी पर्यावरण अनापत्तियों को उन्हें प्रास्थगित रखने या वापस लिए जाने हेतु निदेश जारी करने की शक्तियों का प्रत्यायोजन करती है।

[सं. जे-11013/2/2013-आई ए (आई)]

अजय त्यागी, संयुक्त सचिव

MINISTRY OF ENVIRONMENT AND FORESTS

NOTIFICATION

New Delhi, the 28th February, 2014

S.O. 637(E).—In exercise of the powers conferred by section 23 of the Environment (Protection) Act, 1986 (29 of 1986), the Central Government hereby delegates the powers vested in it under section 5 of the said Act to all the State and Union Territory Environment Impact Assessment Authorities (Hereinafter referred to as the said Authorities) constituted by the Central Government under sub-section (3) of section 3 of Environment (Protection) Act, 1986, to issue show cause notice to project proponents in case of violation of the conditions of the environment clearances issued by the said Authorities to projects or activities within their jurisdiction and to issue directions to the said project proponents for keeping such environment clearances in abeyance or withdrawing them, if required, for violations, subject to the condition that the Central Government may revoke such delegations of powers or may itself invoke the provisions of section 5 of the said Act, if in the opinion of the Central Government such a Course of action is necessary in the public interest.

[No. J-11013/2/2013-IA. (I)]

AJAY TYAGI, Jt. Secy.

अधिसूचना

नई दिल्ली, 28 फरवरी, 2014

का.आ. 638(अ).—केन्द्रीय सरकार, पर्यावरण (संरक्षण) अधिनियम, 1986 (1986 का 29) की धारा 19 के खण्ड (क) द्वारा प्रदत्त शक्तियों का प्रयोग करते हुए उक्त की धारा के प्रयोजन के लिए इससे उपाबद्ध उस सारणी के स्तंभ (3) में उनमें से प्रत्येक के सामने उल्लिखित अधिकारिता के साथ उस सारणी के स्तंभ (2) में उल्लिखित प्राधिकरण या अधिकारी को प्रातिकृत करती है:

सारणी

क्रम संख्यांक	प्राधिकरण/अधिकारी	अधिकारिता
(1)	(2)	(3)
1.	पर्यावरण (संरक्षण) अधिनियम, 1986 की धारा 3 की उपधारा (3) के अधीन केन्द्रीय सरकार द्वारा गठित राज्य या संघ राज्यक्षेत्र स्तर पर्यावरण समाघात प्राधिकरण (एस.ई.आई.ए.ए.)	संपूर्ण राज्य या संघ राज्यक्षेत्र
2.	पर्यावरण और वन मंत्रालय (एम.ओ.ई.एफ.) के किन्हीं प्रादेशिक कार्यालयों में तैनात कोई निदेशक, वन संरक्षक या अपर प्रधान मुख्य वन संरक्षक	पर्यावरण और वन मंत्रालय द्वारा यथा-विनिश्चित प्रादेशिक कार्यालय की अधिकारिता

[सं. जे-11013/2/2013-आई ए (आई)]

अजय त्यागी, संयुक्त सचिव

NOTIFICATION

New Delhi, the 28th February, 2014

S.O. 638(E).—In exercise of the powers conferred by clause (a) of section 19 of the Environment (Protection) Act, 1986 (29 of 1986), the Central Government hereby authorises the Authority or officer mentioned in column (2) of the Table hereto for the purpose of the said section with the jurisdiction mentioned against each of them in column (3) of that Table:

TABLE

S. No.	Authority/Officer	Jurisdiction
(1)	(2)	(3)
1.	State or Union Territory level Environment Impact Assessment Authority (SEIAA) constituted by the Central Government under sub-section (3) of section 3 of the Environment (Protection) Act, 1986.	Whole of State or Union Territory
2.	Any Director, Conservator of Forests or Additional Principal Chief Conservator of Forests Posted in any of the Regional Offices of the Ministry of Environment and Forests (MoEF).	Jurisdiction of the Regional Office as decided by the Ministry of Environment and Forests

[No. J-11013/2/2013-IA. (I)]

AJAY TYAGI, Jt. Secy.


(डॉ. एस. प्रभु)
(Dr. S. PRABHU)

पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय
Min. of Environment, Forest and Climate Change
भारत सरकार, नई दिल्ली
Govt. of India, New Delhi

Annexure - R/4

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प्ररूप 5
(नियम 16 देखें)

विहित प्राधिकारी द्वारा जारी आदेश के विरुद्ध अपील दायर करने के लिए आवेदन

1. अपील हेतु आवेदन करने वाले व्यक्ति का नाम और पता :
2. आदेश की संख्या, तारीख और आदेश पारित करने वाले प्राधिकारी का पता जिसके विरुद्ध अपील की जा रही है (आदेश की प्रमाणित प्रति संलग्न करें)
3. अपील किए जाने का आधार
4. पैरा 2 में निर्दिष्ट ऐसे आदेश से भिन्न, जिसके विरुद्ध अपील की गई है, संलग्नकों की सूची।

तारीख

हस्ताक्षर

नाम और पता

[फा. सं.3-1/2000-एचएसएमडी]

विश्वनाथ सिन्हा, संयुक्त सचिव

MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE

NOTIFICATION

New Delhi, the 28th March, 2016

G.S.R. 343(E).—Whereas the Bio-Medical Waste (Management and Handling) Rules, 1998 was published *vide* notification number S.O. 630 (E) dated the 20th July, 1998, by the Government of India in the erstwhile Ministry of Environment and Forests, provided a regulatory frame work for management of bio-medical waste generated in the country;

And whereas, to implement these rules more effectively and to improve the collection, segregation, processing, treatment and disposal of these bio-medical wastes in an environmentally sound management thereby, reducing the bio-medical waste generation and its impact on the environment, the Central Government reviewed the existing rules;

And whereas, in exercise of the powers conferred by sections 6, 8 and 25 of the Environment (Protection) Act, 1986 (29 of 1986), the Central Government published the draft rules in the Gazette *vide* number G.S.R. 450 (E), dated the 3rd June, 2015 inviting objections or suggestions from the public within sixty days from the date on which copies of the Gazette containing the said notification were made available to the public;

And whereas, the copies of the Gazette containing the said draft rules were made available to the public on the 3rd June, 2015;

And whereas, the objections or comments received within the specified period from the public in respect of the said draft rules have been duly considered by the Central Government;

Now, therefore, in exercise of the powers conferred by section 6, 8 and 25 of the Environment (Protection) Act, 1986 (29 of 1986), and in supersession of the Bio-Medical Waste (Management and Handling) Rules, 1998, except as respects things done or omitted to be done before such suppression, the Central Government hereby makes the following rules, namely:-

1. Short title and commencement.- (1) these rules may be called the Bio-Medical Waste Management Rules, 2016.

(2) They shall come into force on the date of their publication in the Official Gazette.

2. Application.-

(1) These rules shall apply to all persons who generate, collect, receive, store, transport, treat, dispose, or handle bio medical waste in any form including hospitals, nursing homes, clinics, dispensaries, veterinary institutions, animal houses, pathological laboratories, blood banks, ayush hospitals, clinical establishments, research or educational institutions, health camps, medical or surgical camps, vaccination camps, blood donation camps, first aid rooms of schools, forensic laboratories and research labs.

(2). These rules shall not apply to,-

(a) radioactive wastes as covered under the provisions of the Atomic Energy Act, 1962(33 of 1962) and the rules made there under;

(b) hazardous chemicals covered under the Manufacture, Storage and Import of Hazardous Chemicals Rules, 1989 made under the Act;

- (c) solid wastes covered under the Municipal Solid Waste (Management and Handling) Rules, 2000 made under the Act;
- (d) the lead acid batteries covered under the Batteries (Management and Handling) Rules, 2001 made under the Act;
- (e) hazardous wastes covered under the Hazardous Wastes (Management, Handling and Transboundary Movement) Rules, 2008 made under the Act;
- (f) waste covered under the e-Waste (Management and Handling) Rules, 2011 made under the Act; and
- (g) hazardous micro organisms, genetically engineered micro organisms and cells covered under the Manufacture, Use, Import, Export and Storage of Hazardous Microorganisms, Genetically Engineered Micro organisms or Cells Rules, 1989 made under the Act.

3. Definitions.- In these rules, unless the context otherwise requires, -

- (a) "Act" means the Environment (Protection) Act, 1986 (29 of 1986);
- (b) "animal house" means a place where animals are reared or kept for the purpose of experiments or testing;
- (c) "authorisation" means permission granted by the prescribed authority for the generation, collection, reception, storage, transportation, treatment, processing, disposal or any other form of handling of bio-medical waste in accordance with these rules and guidelines issued by the Central Government or Central Pollution Control Board as the case may be;
- (d) "authorised person" means an occupier or operator authorised by the prescribed authority to generate, collect, receive, store, transport, treat, process, dispose or handle bio-medical waste in accordance with these rules and the guidelines issued by the Central Government or the Central Pollution Control Board, as the case may be;
- (e) "biological" means any preparation made from organisms or micro-organisms or product of metabolism and biochemical reactions intended for use in the diagnosis, immunisation or the treatment of human beings or animals or in research activities pertaining thereto;
- (f) "bio-medical waste" means any waste, which is generated during the diagnosis, treatment or immunisation of human beings or animals or research activities pertaining thereto or in the production or testing of biological or in health camps, including the categories mentioned in Schedule I appended to these rules;
- (g) "bio-medical waste treatment and disposal facility" means any facility wherein treatment, disposal of bio-medical waste or processes incidental to such treatment and disposal is carried out, and includes common bio-medical waste treatment facilities;
- (h) "Form" means the Form appended to these rules;
- (i) "handling" in relation to bio-medical waste includes the generation, sorting, segregation, collection, use, storage, packaging, loading, transportation, unloading, processing, treatment, destruction, conversion, or offering for sale, transfer, disposal of such waste;
- (j) "health care facility" means a place where diagnosis, treatment or immunisation of human beings or animals is provided irrespective of type and size of health treatment system, and research activity pertaining thereto;
- (k) "major accident" means accident occurring while handling of bio-medical waste having potential to affect large masses of public and includes toppling of the truck carrying bio-medical waste, accidental release of bio-medical waste in any water body but exclude accidents like needle prick injuries, mercury spills;
- (l) "management" includes all steps required to ensure that bio- medical waste is managed in such a manner as to protect health and environment against any adverse effects due to handling of such waste;
- (m) "occupier" means a person having administrative control over the institution and the premises generating bio-medical waste, which includes a hospital, nursing home, clinic, dispensary, veterinary institution, animal house, pathological laboratory, blood bank, health care facility and clinical establishment, irrespective of their system of medicine and by whatever name they are called;
- (n) "operator of a common bio-medical waste treatment facility" means a person who owns or controls a Common Bio-medical Waste Treatment Facility (CBMWTF) for the collection, reception, storage, transport, treatment, disposal or any other form of handling of bio-medical waste;
- (o) "prescribed authority" means the State Pollution Control Board in respect of a State and Pollution Control Committees in respect of an Union territory;
- (p) "Schedule" means the Schedule appended to these rules.

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- 4. Duties of the Occupier.-** It shall be the duty of every occupier to-
- (a) take all necessary steps to ensure that bio-medical waste is handled without any adverse effect to human health and the environment and in accordance with these rules;
 - (b) make a provision within the premises for a safe, ventilated and secured location for storage of segregated biomedical waste in colored bags or containers in the manner as specified in Schedule I, to ensure that there shall be no secondary handling, pilferage of recyclables or inadvertent scattering or spillage by animals and the bio-medical waste from such place or premises shall be directly transported in the manner as prescribed in these rules to the common bio-medical waste treatment facility or for the appropriate treatment and disposal, as the case may be, in the manner as prescribed in Schedule I;
 - (c) pre-treat the laboratory waste, microbiological waste, blood samples and blood bags through disinfection or sterilisation on-site in the manner as prescribed by the World Health Organisation (WHO) or National AIDS Control Organisation (NACO) guidelines and then sent to the common bio-medical waste treatment facility for final disposal;
 - (d) phase out use of chlorinated plastic bags, gloves and blood bags within two years from the date of notification of these rules;
 - (e) dispose of solid waste other than bio-medical waste in accordance with the provisions of respective waste management rules made under the relevant laws and amended from time to time;
 - (f) not to give treated bio-medical waste with municipal solid waste;
 - (g) provide training to all its health care workers and others, involved in handling of bio medical waste at the time of induction and thereafter at least once every year and the details of training programmes conducted, number of personnel trained and number of personnel not undergone any training shall be provided in the Annual Report;
 - (h) immunise all its health care workers and others, involved in handling of bio-medical waste for protection against diseases including Hepatitis B and Tetanus that are likely to be transmitted by handling of bio-medical waste, in the manner as prescribed in the National Immunisation Policy or the guidelines of the Ministry of Health and Family Welfare issued from time to time;
 - (i) establish a Bar- Code System for bags or containers containing bio-medical waste to be sent out of the premises or place for any purpose within one year from the date of the notification of these rules;
 - (j) ensure segregation of liquid chemical waste at source and ensure pre-treatment or neutralisation prior to mixing with other effluent generated from health care facilities;
 - (k) ensure treatment and disposal of liquid waste in accordance with the Water (Prevention and Control of Pollution) Act, 1974 (6 of 1974);
 - (l) ensure occupational safety of all its health care workers and others involved in handling of bio-medical waste by providing appropriate and adequate personal protective equipments;
 - (m) conduct health check up at the time of induction and at least once in a year for all its health care workers and others involved in handling of bio- medical waste and maintain the records for the same;
 - (n) maintain and update on day to day basis the bio-medical waste management register and display the monthly record on its website according to the bio-medical waste generated in terms of category and colour coding as specified in Schedule I;
 - (o) report major accidents including accidents caused by fire hazards, blasts during handling of bio-medical waste and the remedial action taken and the records relevant thereto, (including nil report) in Form I to the prescribed authority **and also** along with the annual report;
 - (p) make available the annual report on its web-site and all the health care facilities shall make own website within two years from the date of notification of these rules;
 - (q) inform the prescribed authority immediately in case the operator of a facility does not collect the bio-medical waste within the intended time or as per the agreed time;
 - (r) establish a system to review and monitor the activities related to bio-medical waste management, either through an existing committee or by forming a new committee and the Committee shall meet once in every six months and the record of the minutes of the meetings of this committee shall be submitted along with the annual report to the prescribed authority and the healthcare establishments having less than thirty beds shall

designate a qualified person to review and monitor the activities relating to bio-medical waste management within that establishment and submit the annual report;

- (s) maintain all record for operation of incineration, hydro or autoclaving etc., for a period of five years;
- (t) existing incinerators to achieve the standards for treatment and disposal of bio-medical waste as specified in Schedule II for retention time in secondary chamber and Dioxin and Furans within two years from the date of this notification.

5. Duties of the operator of a common bio-medical waste treatment and disposal facility.—It shall be the duty of every operator to -

- (a) take all necessary steps to ensure that the bio-medical waste collected from the occupier is transported, handled, stored, treated and disposed of, without any adverse effect to the human health and the environment, in accordance with these rules and guidelines issued by the Central Government or, as the case may be, the central pollution control board from time to time;
- (b) ensure timely collection of bio-medical waste from the occupier as prescribed under these rules;
- (c) establish bar coding and global positioning system for handling of bio- medical waste within one year;
- (d) inform the prescribed authority immediately regarding the occupiers which are not handing over the segregated bio-medical waste in accordance with these rules;
- (e) provide training for all its workers involved in handling of bio-medical waste at the time of induction and at least once a year thereafter;
- (f) assist the occupier in training conducted by them for bio-medical waste management;
- (g) undertake appropriate medical examination at the time of induction and at least once in a year and immunise all its workers involved in handling of bio-medical waste for protection against diseases, including Hepatitis B and Tetanus, that are likely to be transmitted while handling bio-medical waste and maintain the records for the same;
- (h) ensure occupational safety of all its workers involved in handling of bio-medical waste by providing appropriate and adequate personal protective equipment;
- (i) report major accidents including accidents caused by fire hazards, blasts during handling of bio-medical waste and the remedial action taken and the records relevant thereto, (including nil report) in Form I to the prescribed authority **and also** along with the annual report;
- (j) maintain a log book for each of its treatment equipment according to weight of batch; categories of waste treated; time, date and duration of treatment cycle and total hours of operation;
- (k) allow occupier, who are giving waste for treatment to the operator, to see whether the treatment is carried out as per the rules;
- (l) shall display details of authorisation, treatment, annual report etc on its web-site;
- (m) after ensuring treatment by autoclaving or microwaving followed by mutilation or shredding, whichever is applicable, the recyclables from the treated bio-medical wastes such as plastics and glass, shall be given to recyclers having valid consent or authorisation or registration from the respective State Pollution Control Board or Pollution Control Committee;
- (n) supply non-chlorinated plastic coloured bags to the occupier on chargeable basis, if required;
- (o) common bio-medical waste treatment facility shall ensure collection of biomedical waste on holidays also;
- (p) maintain all record for operation of incineration, hydroor autoclaving for a period of five years; and
- (q) upgrade existing incinerators to achieve the standards for retention time in secondary chamber and Dioxin and Furans within two years from the date of this notification.

6. Duties of authorities.—The Authority specified in column (2) of Schedule-III shall perform the duties as specified in column (3) thereof in accordance with the provisions of these rules.

7. Treatment and disposal.— (1) Bio-medical waste shall be treated and disposed of in accordance with Schedule I, and in compliance with the standards provided in Schedule-II by the health care facilities and common bio-medical waste treatment facility.

(2) Occupier shall hand over segregated waste as per the Schedule-I to common bio-medical waste treatment facility for treatment, processing and final disposal:

Provided that the lab and highly infectious bio-medical waste generated shall be pre-treated by equipment like autoclave or microwave.

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- (3) No occupier shall establish on-site treatment and disposal facility, if a service of common bio-medical waste treatment facility is available at a distance of seventy-five kilometer.
- (4) In cases where service of the common bio-medical waste treatment facility is not available, the Occupiers shall set up requisite biomedical waste treatment equipment like incinerator, autoclave or microwave, shredder prior to commencement of its operation, as per the authorisation given by the prescribed authority.
- (5) Any person including an occupier or operator of a common bio medical waste treatment facility, intending to use new technologies for treatment of bio medical waste other than those listed in Schedule I shall request the Central Government for laying down the standards or operating parameters.
- (6) On receipt of a request referred to in sub-rule (5), the Central Government may determine the standards and operating parameters for new technology which may be published in Gazette by the Central Government.
- (7) Every operator of common bio-medical waste treatment facility shall set up requisite biomedical waste treatment equipments like incinerator, autoclave or microwave, shredder and effluent treatment plant as a part of treatment, prior to commencement of its operation.
- (8) Every occupier shall phase out use of non-chlorinated plastic bags within two years from the date of publication of these rules and after two years from such publication of these rules, the chlorinated plastic bags shall not be used for storing and transporting of bio-medical waste and the occupier or operator of a common bio-medical waste treatment facility shall not dispose of such plastics by incineration and the bags used for storing and transporting biomedical waste shall be in compliance with the Bureau of Indian Standards. Till the Standards are published, the carry bags shall be as per the Plastic Waste Management Rules, 2011.
- (9) After ensuring treatment by autoclaving or microwaving followed by mutilation or shredding, whichever is applicable, the recyclables from the treated bio-medical wastes such as plastics and glass shall be given to such recyclers having valid authorisation or registration from the respective prescribed authority.
- (10) The Occupier or Operator of a common bio-medical waste treatment facility shall maintain a record of recyclable wastes referred to in sub-rule (9) which are auctioned or sold and the same shall be submitted to the prescribed authority as part of its annual report. The record shall be open for inspection by the prescribed authorities.
- (11) The handling and disposal of all the mercury waste and lead waste shall be in accordance with the respective rules and regulations.

8. Segregation, packaging, transportation and storage.-(1) No untreated bio-medical waste shall be mixed with other wastes.

- (2) The bio-medical waste shall be segregated into containers or bags at the point of generation in accordance with Schedule I prior to its storage, transportation, treatment and disposal.
- (3) The containers or bags referred to in sub-rule (2) shall be labeled as specified in Schedule IV.
- (4) Bar code and global positioning system shall be added by the Occupier and common bio-medical waste treatment facility in one year time.
- (5) The operator of common bio-medical waste treatment facility shall transport the bio-medical waste from the premises of an occupier to any off-site bio-medical waste treatment facility only in the vehicles having label as provided in part 'A' of the Schedule IV along with necessary information as specified in part 'B' of the Schedule IV.
- (6) The vehicles used for transportation of bio-medical waste shall comply with the conditions if any stipulated by the State Pollution Control Board or Pollution Control Committee in addition to the requirement contained in the Motor Vehicles Act, 1988 (59 of 1988), if any or the rules made there under for transportation of such infectious waste.
- (7) Untreated human anatomical waste, animal anatomical waste, soiled waste and, biotechnology waste shall not be stored beyond a period of forty –eight hours:

Provided that in case for any reason it becomes necessary to store such waste beyond such a period, the occupier shall take appropriate measures to ensure that the waste does not adversely affect human health and the environment and inform the prescribed authority along with the reasons for doing so.

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- (8) Microbiology waste and all other clinical laboratory waste shall be pre-treated by sterilisation to Log 6 or disinfection to Log 4, as per the World Health Organisation guidelines before packing and sending to the common bio-medical waste treatment facility.
- 9. Prescribed authority.**—(1) The prescribed authority for implementation of the provisions of these rules shall be the State Pollution Control Boards in respect of States and Pollution Control Committees in respect of Union territories.
- (2) The prescribed authority for enforcement of the provisions of these rules in respect of all health care establishments including hospitals, nursing homes, clinics, dispensaries, veterinary institutions, animal houses, pathological laboratories and blood banks of the Armed Forces under the Ministry of Defence shall be the Director General, Armed Forces Medical Services, who shall function under the supervision and control of the Ministry of Defence.
- (3) The prescribed authorities shall comply with the responsibilities as stipulated in Schedule III of these rules.
- 10. Procedure for authorisation.**—Every occupier or operator handling bio-medical waste, irrespective of the quantity shall make an application in Form II to the prescribed authority i.e. State Pollution Control Board and Pollution Control Committee, as the case may be, for grant of authorisation and the prescribed authority shall grant the provisional authorisation in Form III and the validity of such authorisation for bedded health care facility and operator of a common facility shall be synchronised with the validity of the consents.
- (1) The authorisation shall be one time for non-bedded occupiers and the authorisation in such cases shall be deemed to have been granted, if not objected by the prescribed authority within a period of ninety days from the date of receipt of duly completed application along with such necessary documents.
- (2) In case of refusal of renewal, cancellation or suspension of the authorisation by the prescribed authority, the reasons shall be recorded in writing:
- Provided that the prescribed authority shall give an opportunity of being heard to the applicant before such refusal of the authorisation.
- (3) Every application for authorisation shall be disposed of by the prescribed authority within a period of ninety days from the date of receipt of duly completed application along with such necessary documents, failing which it shall be deemed that the authorisation is granted under these rules.
- (4) In case of any change in the bio-medical waste generation, handling, treatment and disposal for which authorisation was earlier granted, the occupier or operator shall intimate to the prescribed authority about the change or variation in the activity and shall submit a fresh application in Form II for modification of the conditions of authorisation.
- 11. Advisory Committee.**—(1) Every State Government or Union territory Administration shall constitute an Advisory Committee for the respective State or Union territory under the chairmanship of the respective health secretary to oversee the implementation of the rules in the respective state and to advise any improvements and the Advisory Committee shall include representatives from the Departments of Health, Environment, Urban Development, Animal Husbandry and Veterinary Sciences of that State Government or Union territory Administration, State Pollution Control Board or Pollution Control Committee, urban local bodies or local bodies or Municipal Corporation, representatives from Indian Medical Association, common bio-medical waste treatment facility and non-governmental organisation.
- (2) Notwithstanding anything contained in sub-rule (1), the Ministry of Defence shall constitute the Advisory Committee (Defence) under the chairmanship of Director General of Health Services of Armed Forces consisting of representatives from the Ministry of Defence, Ministry of Environment, Forest and Climate Change, Central Pollution Control Board, Ministry of Health and Family Welfare, Armed Forces Medical College or Command Hospital.
- (3) The Advisory Committee constituted under sub-rule (1) and (2) shall meet at least once in six months and review all matters related to implementation of the provisions of these rules in the State and Armed Forces Health Care Facilities, as the case may be.
- (4) The Ministry of Health and Defence may co-opt representatives from the other Governmental and non-governmental organisations having expertise in the field of bio-medical waste management.
- 12. Monitoring of implementation of the rules in health care facilities.**—(1) The Ministry of Environment, Forest and Climate Change shall review the implementation of the rules in the country once in a year through the State Health Secretaries and Chairmen or Member Secretary of State Pollution Control Boards and Central Pollution Control Board and the Ministry may also invite experts in the field of bio-medical waste management, if required.
- (2) The Central Pollution Control Board shall monitor the implementation of these rules in respect of all the Armed Forces health care establishments under the Ministry of Defence.

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- (3) The Central Pollution Control Board along with one or more representatives of the Advisory Committee constituted under sub-rule (2) of rule 11, may inspect any Armed Forces health care establishments after prior intimation to the Director General Armed Forces Medical Services.
- (4) Every State Government or Union territory Administration shall constitute District Level Monitoring Committee in the districts under the chairmanship of District Collector or District Magistrate or Deputy Commissioner or Additional District Magistrate to monitor the compliance of the provisions of these rules in the health care facilities generating bio-medical waste and in the common bio-medical waste treatment and disposal facilities, where the bio-medical waste is treated and disposed of.
- (5) The District Level Monitoring Committee constituted under sub-rule (4) shall submit its report once in six months to the State Advisory Committee and a copy thereof shall also be forwarded to State Pollution Control Board or Pollution Control Committee concerned for taking further necessary action.
- (6) The District Level Monitoring Committee shall comprise of District Medical Officer or District Health Officer, representatives from State Pollution Control Board or Pollution Control Committee, Public Health Engineering Department, local bodies or municipal corporation, Indian Medical Association, common bio-medical waste treatment facility and registered non-governmental organisations working in the field of bio-medical waste management and the Committee may co-opt other members and experts, if necessary and the District Medical Officer shall be the Member Secretary of this Committee.
- 13. Annual report.**-(1) Every occupier or operator of common bio-medical waste treatment facility shall submit an annual report to the prescribed authority in Form-IV, on or before the 30th June of every year.
- (2) The prescribed authority shall compile, review and analyse the information received and send this information to the Central Pollution Control Board on or before the 31st July of every year.
- (3) The Central Pollution Control Board shall compile, review and analyse the information received and send this information, along with its comments or suggestions or observations to the Ministry of Environment, Forest and Climate Change on or before 31st August every year.
- (4) The Annual Reports shall also be available online on the websites of Occupiers, State Pollution Control Boards and Central Pollution Control Board.
- 14. Maintenance of records.**-(1) Every authorised person shall maintain records related to the generation, collection, reception, storage, transportation, treatment, disposal or any other form of handling of bio-medical waste, for a period of five years, in accordance with these rules and guidelines issued by the Central Government or the Central Pollution Control Board or the prescribed authority as the case may be.
- (2) All records shall be subject to inspection and verification by the prescribed authority or the Ministry of Environment, Forest and Climate Change at any time.
- 15. Accident reporting.**-(1) In case of any major accident at any institution or facility or any other site while handling bio-medical waste, the authorised person shall intimate immediately to the prescribed authority about such accident and forward a report within twenty-four hours in writing regarding the remedial steps taken in Form I.
- (2) Information regarding all other accidents and remedial steps taken shall be provided in the annual report in accordance with rule 13 by the occupier.
- 16. Appeal.**-(1) Any person aggrieved by an order made by the prescribed authority under these rules may, within a period of thirty days from the date on which the order is communicated to him, prefer an appeal in Form V to the Secretary (Environment) of the State Government or Union territory administration .
- (2) Any person aggrieved by an order of the Director General Armed Forces Medical Services under these rules may, within thirty days from the date on which the order is communicated to him, prefer an appeal in Form V to the Secretary, Ministry of Environment, Forest and Climate Change.
- (3) The authority referred to in sub-para (1) and (2) as the case may be, may entertain the appeal after the expiry of the said period of thirty days, if it is satisfied that the appellant was prevented by sufficient cause from filing the appeal in time.
- (4) The appeal shall be disposed of within a period of ninety days from the date of its filing.
- 17. Site for common bio-medical waste treatment and disposal facility.**-(1) Without prejudice to rule 5 of these rules, the department in the business allocation of land assignment shall be responsible for providing suitable site for setting up of common biomedical waste treatment and disposal facility in the State Government or Union territory Administration.

(2) The selection of site for setting up of such facility shall be made in consultation with the prescribed authority, other stakeholders and in accordance with guidelines published by the Ministry of Environment, Forest and Climate Change or Central Pollution Control Board.

18. **Liability of the occupier, operator of a facility.**- (1) The occupier or an operator of a common bio-medical waste treatment facility shall be liable for all the damages caused to the environment or the public due to improper handling of bio- medical wastes.

(2) The occupier or operator of common bio-medical waste treatment facility shall be liable for action under section 5 and section 15 of the Act, in case of any violation.

SCHEDULE I

[See rules 3 (e), 4(b), 7(1), 7(2), 7(5), 7 (6) and 8(2)]

Part-1

Biomedical wastes categories and their segregation, collection, treatment, processing and disposal options

Category	Type of Waste	Type of Bag or Container to be used	Treatment and Disposal options
(1)	(2)	(3)	(4)
Yellow	(a) Human Anatomical Waste: Human tissues, organs, body parts and fetus below the viability period (as per the Medical Termination of Pregnancy Act 1971, amended from time to time).	Yellow coloured non-chlorinated plastic bags	Incineration or Plasma Pyrolysis or deep burial*
	(b) Animal Anatomical Waste : Experimental animal carcasses, body parts, organs, tissues, including the waste generated from animals used in experiments or testing in veterinary hospitals or colleges or animal houses.		
	(c) Soiled Waste: Items contaminated with blood, body fluids like dressings, plaster casts, cotton swabs and bags containing residual or discarded blood and blood components.		Incineration or Plasma Pyrolysis or deep burial* In absence of above facilities, autoclaving or micro-waving/ hydroclaving followed by shredding or mutilation or combination of sterilization and shredding. Treated waste to be sent for energy recovery.

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[भाग II-खण्ड 3(i)]

भारत का राजपत्र : असाधारण

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	<p>(d) Expired or Discarded Medicines: Pharmaceutical waste like antibiotics, cytotoxic drugs including all items contaminated with cytotoxic drugs along with glass or plastic ampoules, vials etc.</p>	<p>Yellow coloured non-chlorinated plastic bags or containers</p>	<p>Expired cytotoxic drugs and items contaminated with cytotoxic drugs to be returned back to the manufacturer or supplier for incineration at temperature $>1200^{\circ}\text{C}$ or to common bio-medical waste treatment facility or hazardous waste treatment, storage and disposal facility for incineration at $>1200^{\circ}\text{C}$ Or Encapsulation or Plasma Pyrolysis at $>1200^{\circ}\text{C}$.</p> <p>All other discarded medicines shall be either sent back to manufacturer or disposed by incineration.</p>
	<p>(e) Chemical Waste: Chemicals used in production of biological and used or discarded disinfectants.</p>	<p>Yellow coloured containers or non-chlorinated plastic bags</p>	<p>Disposed of by incineration or Plasma Pyrolysis or Encapsulation in hazardous waste treatment, storage and disposal facility.</p>
	<p>(f) Chemical Liquid Waste: Liquid waste generated due to use of chemicals in production of biological and used or discarded disinfectants, Silver X-ray film developing liquid, discarded Formalin, infected secretions, aspirated body fluids, liquid from laboratories and floor washings, cleaning, house-keeping and disinfecting activities etc.</p>	<p>Separate collection system leading to effluent treatment system</p>	<p>After resource recovery, the chemical liquid waste shall be pre-treated before mixing with other wastewater. The combined discharge shall conform to the discharge norms given in Schedule- III.</p>
	<p>(g) Discarded linen, mattresses, beddings contaminated with blood or body fluid.</p>	<p>Non-chlorinated yellow plastic bags or suitable packing material</p>	<p>Non-chlorinated chemical disinfection followed by incineration or Plasma Pyrolysis or for energy recovery.</p> <p>In absence of above facilities, shredding or mutilation or combination of sterilization and shredding. Treated waste to be sent for energy recovery or incineration or Plasma Pyrolysis.</p>
	<p>(h) Microbiology, Biotechnology and other clinical laboratory waste: Blood bags, Laboratory cultures, stocks or specimens of micro-organisms, live or attenuated vaccines, human and animal cell cultures used in research, industrial laboratories, production of</p>	<p>Autoclave safe plastic bags or containers</p>	<p>Pre-treat to sterilize with non-chlorinated chemicals on-site as per National AIDS Control Organisation or World Health Organisation guidelines thereafter for Incineration.</p>

	biological, residual toxins, dishes and devices used for cultures.		
Red	Contaminated Waste (Recyclable) (a) Wastes generated from disposable items such as tubing, bottles, intravenous tubes and sets, catheters, urine bags, syringes (without needles and <i>fixed needle syringes</i>) and vaccutainers with their needles cut) and gloves.	Red coloured non-chlorinated plastic bags or containers	Autoclaving or micro-waving/ hydroclaving followed by shredding or mutilation or combination of sterilization and shredding. Treated waste to be sent to registered or authorized recyclers or for energy recovery or plastics to diesel or fuel oil or for road making, whichever is possible. Plastic waste should not be sent to landfill sites.
White (Translucent)	Waste sharps including Metals: Needles, syringes with fixed needles, needles from needle tip cutter or burner, scalpels, blades, or any other contaminated sharp object that may cause puncture and cuts. This includes both used, discarded and contaminated metal sharps	Puncture proof, Leak proof, tamper proof containers	Autoclaving or Dry Heat Sterilization followed by shredding or mutilation or encapsulation in metal container or cement concrete; combination of shredding cum autoclaving; and sent for final disposal to iron foundries (having consent to operate from the State Pollution Control Boards or Pollution Control Committees) or sanitary landfill or designated concrete waste sharp pit.
Blue	(a) Glassware: Broken or discarded and contaminated glass including medicine vials and ampoules except those contaminated with cytotoxic wastes.	Cardboard boxes with blue colored marking	Disinfection (by soaking the washed glass waste after cleaning with detergent and Sodium Hypochlorite treatment) or through autoclaving or microwaving or hydroclaving and then sent for recycling.
	(b) Metallic Body Implants	Cardboard boxes with blue colored marking	

*Disposal by deep burial is permitted only in rural or remote areas where there is no access to common bio-medical waste treatment facility. This will be carried out with prior approval from the prescribed authority and as per the Standards specified in Schedule-III. The deep burial facility shall be located as per the provisions and guidelines issued by Central Pollution Control Board from time to time.

Part -2

- (1) All plastic bags shall be as per BIS standards as and when published, till then the prevailing Plastic Waste Management Rules shall be applicable.
- (2) Chemical treatment using at least 10% Sodium Hypochlorite having 30% residual chlorine for twenty minutes or any other equivalent chemical reagent that should demonstrate $\text{Log}_{10}4$ reduction efficiency for microorganisms as given in Schedule- III.
- (3) Mutilation or shredding must be to an extent to prevent unauthorized reuse.

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- (4) There will be no chemical pretreatment before incineration, except for microbiological, lab and highly infectious waste.
 - (5) Incineration ash (ash from incineration of any bio-medical waste) shall be disposed through hazardous waste treatment, storage and disposal facility, if toxic or hazardous constituents are present beyond the prescribed limits as given in the Hazardous Waste (Management, Handling and Transboundary Movement) Rules, 2008 or as revised from time to time.
 - (6) Dead Fetus below the viability period (as per the Medical Termination of Pregnancy Act 1971, amended from time to time) can be considered as human anatomical waste. Such waste should be handed over to the operator of common bio-medical waste treatment and disposal facility in yellow bag with a copy of the official Medical Termination of Pregnancy certificate from the Obstetrician or the Medical Superintendent of hospital or healthcare establishment.
 - (7) Cytotoxic drug vials shall not be handed over to unauthorised person under any circumstances. These shall be sent back to the manufactures for necessary disposal at a single point. As a second option, these may be sent for incineration at common bio-medical waste treatment and disposal facility or TSDFs or plasma pyrolysis at temperature $>1200^{\circ}\text{C}$.
 - (8) Residual or discarded chemical wastes, used or discarded disinfectants and chemical sludge can be disposed at hazardous waste treatment, storage and disposal facility. In such case, the waste should be sent to hazardous waste treatment, storage and disposal facility through operator of common bio-medical waste treatment and disposal facility only.
 - (9) On-site pre-treatment of laboratory waste, microbiological waste, blood samples, blood bags should be disinfected or sterilized as per the Guidelines of World Health Organisation or National AIDS Control Organisation and then given to the common bio-medical waste treatment and disposal facility.
 - (10) Installation of in-house incinerator is not allowed. However in case there is no common biomedical facility nearby, the same may be installed by the occupier after taking authorisation from the State Pollution Control Board.
 - (11) Syringes should be either mutilated or needles should be cut and or stored in tamper proof, leak proof and puncture proof containers for sharps storage. Wherever the occupier is not linked to a disposal facility it shall be the responsibility of the occupier to sterilize and dispose in the manner prescribed.
 - (12) Bio-medical waste generated in households during healthcare activities shall be segregated as per these rules and handed over in separate bags or containers to municipal waste collectors. Urban Local Bodies shall have tie up with the common bio-medical waste treatment and disposal facility to pickup this waste from the Material Recovery Facility (MRF) or from the house hold directly, for final disposal in the manner as prescribed in this Schedule.

SCHEDULE II

[See rule 4(t), 7(1) and 7(6)]

STANDARDS FOR TREATMENT AND DISPOSAL OF BIO-MEDICAL WASTES

1. STANDARDS FOR INCINERATION.-

All incinerators shall meet the following operating and emission standards-

A. Operating Standards

- 1). Combustion efficiency (CE) shall be at least 99.00%.
- 2). The Combustion efficiency is computed as follows:

$$\text{C.E.} = \frac{\% \text{CO}_2}{\% \text{CO}_2 + \% \text{CO}} \times 100$$

- 3). The temperature of the primary chamber shall be a minimum of 800°C and the secondary chamber shall be minimum of 1050°C or -50°C .

4). The secondary chamber gas residence time shall be at least two seconds.

B. Emission Standards

Sl. No.	Parameter	Standards	
		(3)	(4)
		Limiting concentration in mg Nm³ unless stated	Sampling Duration in minutes, unless stated
1.	Particulate matter	50	30 or 1NM ³ of sample volume, whichever is more
2.	Nitrogen Oxides NO and NO ₂ expressed as NO ₂	400	30 for online sampling or grab sample
3.	HCl	50	30 or 1NM ³ of sample volume, whichever is more
4.	Total Dioxins and Furans	0.1ngTEQ/Nm ³ (at 11% O ₂)	8 hours or 5NM ³ of sample volume, whichever is more
5.	Hg and its compounds	0.05	2 hours or 1NM ³ of sample volume, whichever is more

C. Stack Height: Minimum stack height shall be 30 meters above the ground and shall be attached with the necessary monitoring facilities as per requirement of monitoring of 'general parameters' as notified under the Environment (Protection) Act, 1986 and in accordance with the Central Pollution Control Board Guidelines of Emission Regulation Part-III.

Note:

- The existing incinerators shall comply with the above within a period of two years from the date of the notification.
- The existing incinerators shall comply with the standards for Dioxins and Furans of 0.1ngTEQ/Nm³, as given below within two years from the date of commencement of these rules.
- All upcoming common bio-medical waste treatment facilities having incineration facility or captive incinerator shall comply with standards for Dioxins and Furans.
- The existing secondary combustion chambers of the incinerator and the pollution control devices shall be suitably retrofitted, if necessary, to achieve the emission limits.
- Wastes to be incinerated shall not be chemically treated with any chlorinated disinfectants.
- Ash from incineration of biomedical waste shall be disposed of at common hazardous waste treatment and disposal facility. However, it may be disposed of in municipal landfill, if the toxic metals in incineration ash are within the regulatory quantities as defined under the Hazardous Waste (Management and Handling and Transboundary Movement) Rules, 2008 as amended from time to time.
- Only low Sulphur fuel like Light Diesel Oil or Low Sulphur Heavy Stock or Diesel, Compressed Natural Gas, Liquefied Natural Gas or Liquefied Petroleum Gas shall be used as fuel in the incinerator.
- The occupier or operator of a common bio-medical waste treatment facility shall monitor the stack gaseous emissions (under optimum capacity of the incinerator) once in three months through a laboratory approved under the Environment (Protection) Act, 1986 and record of such analysis results shall be maintained and submitted to the prescribed authority. In case of dioxins and furans, monitoring should be done once in a year.
- The occupier or operator of the common bio-medical waste treatment facility shall install continuous emission monitoring system for the parameters as stipulated by State Pollution Control Board or Pollution Control Committees in authorisation and transmit the data real time to the servers at State Pollution Control Board or Pollution Control Committees and Central Pollution Control Board.
- All monitored values shall be corrected to 11% Oxygen on dry basis.
- Incinerators (combustion chambers) shall be operated with such temperature, retention time and turbulence, as to achieve Total Organic Carbon content in the slag and bottom ashes less than 3% or their loss on ignition shall be less than 5% of the dry weight.

(1) The occupier or operator of a common bio-medical waste incinerator shall use combustion gas analyzer to measure CO₂, CO and O₂.

2. Operating and Emission Standards for Disposal by Plasma Pyrolysis or Gasification:

A. Operating Standards:

All the operators of the Plasma Pyrolysis or Gasification shall meet the following operating and emission standards:

- 1) Combustion Efficiency (CE) shall be at least 99.99%.
- 2) The Combustion Efficiency is computed as follows.

$$\text{C.E} = \frac{\% \text{CO}_2}{(\% \text{CO}_2 + \% \text{CO})} \times 100$$

- 3) The temperature of the combustion chamber after plasma gasification shall be 1050 ± 50 ° C with gas residence time of at least 2(two) second, with minimum 3 % Oxygen in the stack gas.
- 4) The Stack height should be minimum of 30 m above ground level and shall be attached with the necessary monitoring facilities as per requirement of monitoring of 'general parameters' as notified under the Environment (Protection) Act, 1986 and in accordance with the CPCB Guidelines of Emission Regulation Part-III.

B. Air Emission Standards and Air Pollution Control Measures

- (i) Emission standards for incinerator, notified at SI No.1 above in this Schedule, and revised from time to time, shall be applicable for the Plasma Pyrolysis or Gasification also.
- (ii) Suitably designed air pollution control devices shall be installed or retrofitted with the 'Plasma Pyrolysis or Gasification to achieve the above emission limits, if necessary.
- (iii) Wastes to be treated using Plasma Pyrolysis or Gasification shall not be chemically treated with any chlorinated disinfectants and chlorinated plastics shall not be treated in the system.

C. Disposal of Ash Vitrified Material: The ash or vitrified material generated from the 'Plasma Pyrolysis or Gasification shall be disposed off in accordance with the Hazardous Waste (Management, Handling and Transboundary Movement) Rules 2008 and revisions made thereafter in case the constituents exceed the limits prescribed under Schedule II of the said Rules or else in accordance with the provisions of the Environment (Protection) Act, 1986, whichever is applicable.

3. STANDARDS FOR AUTOCLAVING OF BIO-MEDICAL WASTE.-

The autoclave should be dedicated for the purposes of disinfecting and treating bio-medical waste.

- (1) When operating a gravity flow autoclave, medical waste shall be subjected to:
 - (i) a temperature of not less than 121° C and pressure of 15 pounds per square inch (psi) for an autoclave residence time of not less than 60 minutes; or
 - (ii) a temperature of not less than 135° C and a pressure of 31 psi for an autoclave residence time of not less than 45 minutes; or
 - (iii) a temperature of not less than 149° C and a pressure of 52 psi for an autoclave residence time of not less than 30 minutes.
- (2) When operating a vacuum autoclave, medical waste shall be subjected to a minimum of three pre-vacuum pulse to purge the autoclave of all air. The air removed during the pre-vacuum, cycle should be decontaminated by means of HEPA and activated carbon filtration, steam treatment, or any other method to prevent release of pathogen. The waste shall be subjected to the following:
 - (i) a temperature of not less than 121°C and pressure of 15 psi per an autoclave residence time of not less than 45 minutes; or
 - (ii) a temperature of not less than 135°C and a pressure of 31 psi for an autoclave residence time of not less than 30 minutes;
- (3) Medical waste shall not be considered as properly treated unless the time, temperature and pressure indicators indicate that the required time, temperature and pressure were reached during the autoclave process. If for any reasons, time temperature or pressure indicator indicates that the required temperature, pressure or residence time was not

reached, the entire load of medical waste must be autoclaved again until the proper temperature, pressure and residence time were achieved.

(4) **Recording of operational parameters:** Each autoclave shall have graphic or computer recording devices which will automatically and continuously monitor and record dates, time of day, load identification number and operating parameters throughout the entire length of the autoclave cycle.

(5) **Validation test for autoclave:** The validation test shall use four biological indicator strips, one shall be used as a control and left at room temperature, and three shall be placed in the approximate center of three containers with the waste. Personal protective equipment (gloves, face mask and coveralls) shall be used when opening containers for the purpose of placing the biological indicators. At least one of the containers with a biological indicator should be placed in the most difficult location for steam to penetrate, generally the bottom center of the waste pile. The occupier or operator shall conduct this test three consecutive times to define the minimum operating conditions. The temperature, pressure and residence time at which all biological indicator vials or strips for three consecutive tests show complete inactivation of the spores shall define the minimum operating conditions for the autoclave. After determining the minimum temperature, pressure and residence time, the occupier or operator of a common biomedical waste treatment facility shall conduct this test once in three months and records in this regard shall be maintained.

(6) **Routine Test:** A chemical indicator strip or tape that changes colour when a certain temperature is reached can be used to verify that a specific temperature has been achieved. It may be necessary to use more than one strip over the waste package at different locations to ensure that the inner content of the package has been adequately autoclaved. The occupier or operator of a common bio medical waste treatment facility shall conduct this test during autoclaving of each batch and records in this regard shall be maintained.

(7) **Spore testing:** The autoclave should completely and consistently kill the approved biological indicator at the maximum design capacity of each autoclave unit. Biological indicator for autoclave shall be *Geobacillusstearothermophilus* spores using vials or spore Strips; with at least 1×10^6 spores. Under no circumstances will an autoclave have minimum operating parameters less than a residence time of 30 minutes, a temperature less than 121°C or a pressure less than 15 psi. The occupier or operator of a common bio medical waste treatment and disposal facility shall conduct this test at least once in every week and records in this regard shall be maintained.

4. STANDARDS OF MICROWAVING.-

(1) Microwave treatment shall not be used for cytotoxic, hazardous or radioactive wastes, contaminated animal carcasses, body parts and large metal items.

(2) The microwave system shall comply with the efficacy test or routine tests and a performance guarantee may be provided by the supplier before operation of the limit.

(3) The microwave should completely and consistently kill the bacteria and other pathogenic organisms that are ensured by approved biological indicator at the maximum design capacity of each microwave unit. Biological indicators for microwave shall be *Bacillus atrophaeus* spores using vials or spore strips with at least 1×10^4 spores per detachable strip. The biological indicator shall be placed with waste and exposed to same conditions as the waste during a normal treatment cycle.

5. **STANDARDS FOR DEEP BURIAL.-** (1) A pit or trench should be dug about two meters deep. It should be half filled with waste, then covered with lime within 50 cm of the surface, before filling the rest of the pit with soil.

(2) It must be ensured that animals do not have any access to burial sites. Covers of galvanised iron or wire meshes may be used.

(3) On each occasion, when wastes are added to the pit, a layer of 10 cm of soil shall be added to cover the wastes.

(4) Burial must be performed under close and dedicated supervision.

(5) The deep burial site should be relatively impermeable and no shallow well should be close to the site.

(6) The pits should be distant from habitation, and located so as to ensure that no contamination occurs to surface water or ground water. The area should not be prone to flooding or erosion.

(7) The location of the deep burial site shall be authorised by the prescribed authority.

(8) The institution shall maintain a record of all pits used for deep burial.

(9) The ground water table level should be a minimum of six meters below the lower level of deep burial pit.

6. STANDARDS FOR EFFICACY OF CHEMICAL DISINFECTION

Microbial inactivation efficacy is equated to "Log10 kill" which is defined as the difference between the logarithms of number of test microorganisms before and after chemical treatment. Chemical disinfection methods shall demonstrate a 4 Log10 reduction or greater for *Bacillus Subtilis* (ATCC 19659) in chemical treatment systems.

7. STANDARDS FOR DRY HEAT STERILIZATION

Waste sharps can be treated by dry heat sterilization at a temperature not less than 185°C, at least for a residence period of 150 minutes in each cycle, which sterilization period of 90 minutes. There should be automatic recording system to monitor operating parameters.

(i) Validation test for Sharps sterilization unit

Waste sharps sterilization unit should completely and consistently kill the biological indicator *Geobacillus Stearothermophilus* or *Bacillus Atropheauspoers* using vials with at least log₁₀ 6 spores per ml. The test shall be carried out once in three months

(ii) Routine test

A chemical indicator strip or tape that changes colour when a certain temperature is reached can be used to verify that a specific temperature has been achieved. It may be necessary to use more than one strip over the waste to ensure that the inner content of the sharps has been adequately disinfected. This test shall be performed once in week and records in this regard shall be maintained.

8. STANDARDS FOR LIQUID WASTE.-

(1) The effluent generated or treated from the premises of occupier or operator of a common bio medical waste treatment and disposal facility, before discharge into the sewer should conform to the following limits-

PARAMETERS	PERMISSIBLE LIMITS
pH	6.5-9.0
Suspended solids	100 mg/l
Oil and grease	10 mg/l
BOD	30 mg/l
COD	250 mg/l
Bio-assay test	90% survival of fish after 96 hours in 100% effluent.

(2) Sludge from Effluent Treatment Plant shall be given to common bio-medical waste treatment facility for incineration or to hazardous waste treatment, storage and disposal facility for disposal.

Schedule III

[See rule 6 and 9(3)]

List of Prescribed Authorities and the Corresponding Duties

Sl. No. (1)	Authority (2)	Corresponding Duties (3)
1	Ministry of Environment, Forest and Climate Change, Government of India	(i) Making Policies concerning bio-medical waste Management in the Country including notification of Rules and amendments to the Rules as and when required. (ii) Providing financial assistance for training and awareness programmes on bio-medical waste management related activities to for the State Pollution Control Boards or Pollution Control Committees. (iii) Facilitating financial assistance for setting up or up-gradation of common bio-medical waste treatment facilities. (iv) Undertake or support operational research and assessment with reference to risks to environment and health due to bio-medical waste and previously unknown disposables and wastes from new types of equipment. (v) Constitution of Monitoring Committee for implementation of the rules. (vi) Hearing Appeals and give decision made in Form- V against order passed by the prescribed authorities. (vii) Develop Standard manual for Trainers and Training.

		(viii) Notify the standards or operating parameters for new technologies for treatment of bio medical waste other than those listed in Schedule- I.
2	Central or State Ministry of Health and Family Welfare, Central Ministry for Animal Husbandry and Veterinary or State Department of Animal Husbandry and Veterinary.	<p>(i) Grant of license to health care facilities or nursing homes or veterinary establishments with a condition to obtain authorisation from the prescribed authority for bio-medical waste management.</p> <p>(ii) Monitoring, Refusal or Cancellation of license for health care facilities or nursing homes or veterinary establishments for violations of conditions of authorisation or provisions under these Rules.</p> <p>(iii) Publication of list of registered health care facilities with regard to bio-medical waste generation, treatment and disposal.</p> <p>(iv) Undertake or support operational research and assessment with reference to risks to environment and health due to bio-medical waste and previously unknown disposables and wastes from new types of equipment.</p> <p>(v) Coordinate with State Pollution Control Boards for organizing training programmes to staff of health care facilities and municipal workers on bio-medical waste.</p> <p>(vi) Constitution of Expert Committees at National or State level for overall review and promotion of clean or new technologies for bio-medical waste management.</p> <p>(vii) Organizing or Sponsoring of trainings for the regulatory authorities and health care facilities on bio-medical waste management related activities.</p> <p>(viii) Sponsoring of mass awareness campaigns in electronic media and print media.</p>
3	Ministry of Defence	<p>(i) Grant and renewal of authorisation to Armed Forces health care facilities or common bio-medical waste treatment facilities (Rule 9).</p> <p>(ii) Conduct training courses for authorities dealing with management of bio-medical wastes in Armed Forces health care facilities or treatment facilities in association with State Pollution Control Boards or Pollution Control Committees or Central Pollution Control Board or Ministry of Environment, Forest and Climate Change.</p> <p>(iii) Publication of inventory of occupiers and bio-medical waste generation from Armed Forces health care facilities or occupiers</p> <p>(iv) Constitution of Advisory Committee for implementation of the rules.</p> <p>(v) Review of management of bio-medical waste generation in the Armed Forces health care facilities through its Advisory Committee (Rule 11).</p> <p>(vi) Submission of annual report to Central Pollution Control Board within the stipulated time period (Rule 13).</p>
4.	Central Pollution Control Board	<p>(i) Prepare Guidelines on bio-medical waste Management and submit to the Ministry of Environment, Forest and Climate Change.</p> <p>(ii) Co-ordination of activities of State Pollution Control Boards or Pollution Control Committees on bio-medical waste.</p>

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भारत का राजपत्र : असाधारण

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		<ul style="list-style-type: none"> (iii) Conduct training courses for authorities dealing with management of bio-medical waste. (iv) Lay down standards for new technologies for treatment and disposal of bio-medical waste (Rule 7) and prescribe specifications for treatment and disposal of bio-medical wastes (Rule 7). (v) Lay down Criteria for establishing common bio-medical waste treatment facilities in the Country. (vi) Random inspection or monitoring of health care facilities and common bio-medical waste treatment facilities. (vii) Review and analysis of data submitted by the State Pollution Control Boards on bio-medical waste and submission of compiled information in the form of annual report along with its observations to Ministry of Environment, Forest and Climate Change . (viii) Inspection and monitoring of health care facilities operated by the Director General, Armed Forces Medical Services (Rule 9). (ix) Undertake or support research or operational research regarding bio-medical waste.
5.	State Government of Health or Union Territory Government or Administration	<ul style="list-style-type: none"> (i) To ensure implementation of the rule in all health care facilities or occupiers. (ii) Allocation of adequate funds to Government health care facilities for bio-medical waste management. (iii) Procurement and allocation of treatment equipments and make provision for consumables for bio-medical waste management in Government health care facilities. (iv) Constitute State or District Level Advisory Committees under the District Magistrate or Additional District Magistrate to oversee the bio-medical waste management in the Districts. (v) Advise State Pollution Control Boards or Pollution Control Committees on implementation of these Rules. (vi) Implementation of recommendations of the Advisory Committee in all the health care facilities.
6.	State Pollution Control Boards or Pollution Control Committees	<ul style="list-style-type: none"> (i) Inventorisation of Occupiers and data on bio-medical waste generation, treatment & disposal. (ii) Compilation of data and submission of the same in annual report to Central Pollution Control Board within the stipulated time period. (iii) Grant and renewal, suspension or refusal cancellation or of authorisation under these rules (Rule 7, 8 and 10). (iv) Monitoring of compliance of various provisions and conditions of authorisation. (v) Action against health care facilities or common bio-medical waste treatment facilities for violation of these rules (Rule 18). (vi) Organizing training programmes to staff of health care facilities and common bio-medical waste treatment facilities and State Pollution Control Boards or Pollution Control Committees Staff on segregation, collection, storage, transportation, treatment and disposal of bio-medical wastes.

		<ul style="list-style-type: none"> (vii) Undertake or support research or operational research regarding bio-medical waste management. (viii) Any other function under these rules assigned by Ministry of Environment, Forest and Climate Change or Central Pollution Control Board from time to time. (ix) Implementation of recommendations of the Advisory Committee. (x) Publish the list of Registered or Authorised (or give consent) Recyclers. (xi) Undertake and support third party audits of the common bio-medical waste treatment facilities in their State.
7	Municipalities or Corporations, Urban Local Bodies and Gram Panchayats	<ul style="list-style-type: none"> (i) Provide or allocate suitable land for development of common bio-medical waste treatment facilities in their respective jurisdictions as per the guidelines of Central Pollution Control Board. (ii) Collect other solid waste (other than the bio-medical waste) from the health care facilities as per the Municipal Solid Waste (Management and handling) Rules, 2000 or as amended time to time. (iii) Any other function stipulated under these Rules.

SCHEDULE IV

[See rule 8(3) and (5)]

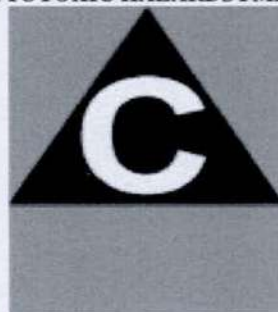
Part A

LABEL FOR BIO-MEDICAL WASTE CONTAINERS or BAGS



HANDLE WITH CARE

CYTOTOXIC HAZARD SYMBOL



HANDLE WITH CARE

Part B

LABEL FOR TRANSPORTING BIO-MEDICAL WASTE BAGS OR CONTAINERS

DayMonth

Year

Date of generation

Waste category Number

Waste quantity.....

Sender's Name and Address

Phone Number

Receiver's Name and Address:

Phone Number

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[भाग II-खण्ड 3(i)]

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Fax Number.....

Fax Number

Contact Person

Contact Person

In case of emergency please contact :

Name and Address :

Phone No.

Note :Label shall be non-washable and prominently visible.

FORM - I

[(See rule 4(o), 5(i) and 15 (2))]

ACCIDENT REPORTING

1. Date and time of accident :
2. Type of Accident :
3. Sequence of events leading to accident :
4. Has the Authority been informed immediately :
5. The type of waste involved in accident :
6. Assessment of the effects of the accidents on human health and the environment:
7. Emergency measures taken :
8. Steps taken to alleviate the effects of accidents :
9. Steps taken to prevent the recurrence of such an accident :
10. Does you facility has an Emergency Control policy? If yes give details:

Date :

Signature

Place:

Designation

FORM - II

(See rule10)

APPLICATION FOR AUTHORISATION OR RENEWAL OF AUTHORISATION

(To be submitted by occupier of health care facility or common bio-medical waste treatment facility)

To

The Prescribed Authority
(Name of the State or UT Administration)
Address.

1. Particulars of Applicant:

(i) Name of the Applicant:
(In block letters & in full)

(ii) Name of the health care facility (HCF) or common bio-medical waste treatment facility (CBWTF) :

(iii) Address for correspondence:

(iv) Tele No., Fax No.:

(v) Email:

(vi) Website Address:

2. Activity for which authorisation is sought:

Activity	Please tick
Generation, segregation	
Collection,	
Storage	
packaging	
Reception	
Transportation	
Treatment or processing or conversion	
Recycling	
Disposal or destruction	
use	
offering for sale, transfer	
Any other form of handling	

3. Application for fresh or renewal of authorisation (please tick whatever is applicable):

(i) Applied for CTO/CTE Yes/No

(ii) In case of renewal previous authorisation number and date:

(iii) Status of Consents:

(a) under the Water (Prevention and Control of Pollution) Act, 1974

(b) under the Air (Prevention and Control of Pollution) Act, 1981:

4. (i) Address of the health care facility (HCF) or common bio-medical waste treatment facility (CBWTF):
(ii) GPS coordinates of health care facility (HCF) or common bio-medical waste treatment facility (CBWTF):
5. Details of health care facility (HCF) or common bio-medical waste treatment facility (CBWTF):
- (i) Number of beds of HCF:
(ii) Number of patients treated per month by HCF:
(iii) Number healthcare facilities covered by CBMWTF: _____
(iv) No of beds covered by CBMWTF: _____
(v) Installed treatment and disposal capacity of CBMWTF: _____ Kg per day
(vi) Quantity of biomedical waste treated or disposed by CBMWTF: _____ Kg/day
(vii) Area or distance covered by CBMWTF: _____
(pl. attach map a map with GPS locations of CBMWTF and area of coverage)
(viii) Quantity of Biomedical waste handled, treated or disposed:

Category	Type of Waste	Quantity Generated or Collected, kg/day	Method of Treatment and Disposal (Refer Schedule-I)
(1)	(2)	(3)	(4)
Yellow	(a) Human Anatomical Waste:		
	(b) Animal Anatomical Waste :		
	(c) Soiled Waste:		
	(d) Expired or Discarded Medicines:		
	(e) Chemical Solid Waste:		
	(f) Chemical Liquid Waste :		

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	(g) Discarded linen, mattresses, beddings contaminated with blood or body fluid.		
	(h) Microbiology, Biotechnology and other clinical laboratory waste:		
Red	Contaminated Waste (Recyclable)		
White (Translucent)	Waste sharps including Metals:		
Blue	Glassware:		
	Metallic Body Implants		

6. Brief description of arrangements for handling of biomedical waste (attach details):

- (i) Mode of transportation (if any) of bio-medical waste:
(ii) Details of treatment equipment (please give details such as the number, type & capacity of each unit)

No of units Capacity of each unit

Incinerators :
Plasma Pyrolysis:
Autoclaves:
Microwave:
Hydroclave:
Shredder:
Needle tip cutter or destroyer
Sharps encapsulation or concrete pit:
Deep burial pits:
Chemical disinfection:
Any other treatment equipment:

7. Contingency plan of common bio-medical waste treatment facility (CBWTF)(attach documents):

8. Details of directions or notices or legal actions if any during the period of earlier authorisation

9. Declaration

I do hereby declare that the statements made and information given above are true to the best of my knowledge and belief and that I have not concealed any information.

I do also hereby undertake to provide any further information sought by the prescribed authority in relation to these rules and to fulfill any conditions stipulated by the prescribed authority.

Date :

Signature of the Applicant

Place :

Designation of the Applicant

FORM -III

(See rule 10)

AUTHORISATION

(Authorisation for operating a facility for generation, collection, reception, treatment, storage, transport and disposal of biomedical wastes)

1. File number of authorisation and date of issue.....

2. M/s _____ an occupier or operator of the facility located at _____ is hereby granted an authorisation for;

Activity
Generation, segregation
Collection,
Storage
packaging

Please tick

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Reception
 Transportation
 Treatment or processing or conversion
 Recycling
 Disposal or destruction
 use
 offering for sale, transfer
 Any other form of handling

3. M/s _____ is hereby authorized for handling of biomedical waste as per the capacity given below:

- (i) Number of beds of HCF: _____
 (ii) Number healthcare facilities covered by CBMWTF: _____
 (iii) Installed treatment and disposal capacity: _____ Kg per day
 (iv) Area or distance covered by CBMWTF: _____

 (v) Quantity of Biomedical waste handled, treated or disposed:

Type of Waste	Category	Quantity permitted for Handling
Yellow		
Red		
White (Translucent)		
Blue		

4. This authorisation shall be in force for a period of Years from the date of issue.

5. This authorisation is subject to the conditions stated below and to such other conditions as may be specified in the rules for the time being in force under the Environment (Protection) Act, 1986.

Date

Signature.....

Place:

Designation

*Terms and conditions of authorisation **

- The authorisation shall comply with the provisions of the Environment (Protection) Act, 1986 and the rules made there under.
- The authorisation or its renewal shall be produced for inspection at the request of an officer authorised by the prescribed authority.
- The person authorized shall not rent, lend, sell, transfer or otherwise transport the biomedical wastes without obtaining prior permission of the prescribed authority.
- Any unauthorised change in personnel, equipment or working conditions as mentioned in the application by the person authorised shall constitute a breach of his authorisation.
- It is the duty of the authorised person to take prior permission of the prescribed authority to close down the facility and such other terms and conditions may be stipulated by the prescribed authority.

Form - IV

(See rule 13)

ANNUAL REPORT

[To be submitted to the prescribed authority on or before 30th June every year for the period from January to December of the preceding year, by the occupier of health care facility (HCF) or common bio-medical waste treatment facility (CBWTF)]

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Sl. No.	Particulars		
1.	Particulars of the Occupier	:	
	(i) Name of the authorised person (occupier or operator of facility)	:	
	(ii) Name of HCF or CBMWTF	:	
	(iii) Address for Correspondence	:	
	(iv) Address of Facility	:	
	(v) Tel. No, Fax. No	:	
	(vi) E-mail ID	:	
	(vii) URL of Website	:	
	(viii) GPS coordinates of HCF or CBMWTF	:	
	(ix) Ownership of HCF or CBMWTF	:	(State Government or Private or Semi Govt. or any other)
	(x). Status of Authorisation under the Bio-Medical Waste (Management and Handling) Rules	:	Authorisation No.:valid up to
	(xi). Status of Consents under Water Act and Air Act	:	Valid up to:
2.	Type of Health Care Facility	:	
	(i) Bedded Hospital	:	No. of Beds:.....
	(ii) Non-bedded hospital (Clinic or Blood Bank or Clinical Laboratory or Research Institute or Veterinary Hospital or any other)	:	
	(iii) License number and its date of expiry	:	
3.	Details of CBMWTF	:	
	(i) Number healthcare facilities covered by CBMWTF	:	
	(ii) No of beds covered by CBMWTF	:	
	(iii) Installed treatment and disposal capacity of CBMWTF:	:	_____ Kg per day
	(iv) Quantity of biomedical waste treated or disposed by CBMWTF	:	_____ Kg/day
4.	Quantity of waste generated or disposed in Kg per annum (on monthly average basis)	:	Yellow Category : Red Category : White: Blue Category : General Solid waste:
5	Details of the Storage, treatment, transportation, processing and Disposal Facility		
	(i) Details of the on-site storage facility	:	Size : Capacity : Provision of on-site storage : (cold storage or any other provision)

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disposal facilities		Type of treatment equipment	No of units	Capacity Kg/day	Quantity treated or disposed in kg per annum
(iii) Quantity of recyclable wastes sold to authorized recyclers after treatment in kg per annum.	:	Red Category (like plastic, glass etc.)			
(iv) No of vehicles used for collection and transportation of biomedical waste	:				
(v) Details of incineration ash and ETP sludge generated and disposed during the treatment of wastes in Kg per annum		Incineration Ash ETP Sludge	Quantity generated	Where disposed	
(vi) Name of the Common Bio-Medical Waste Treatment Facility Operator through which wastes are disposed of	:				
(vii) List of member HCF not handed over bio-medical waste.					
6 Do you have bio-medical waste management committee? If yes, attach minutes of the meetings held during the reporting period					
7 Details trainings conducted on BMW					
(i) Number of trainings conducted on BMW Management.					
(ii) number of personnel trained					
(iii) number of personnel trained at the time of induction					
(iv) number of personnel not undergone any training so far					
(v) whether standard manual for training is available?					
(vi) any other information)					
8 Details of the accident occurred during the year					

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[भाग II-खण्ड 3(i)]

भारत का राजपत्र : असाधारण

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	(i) Number of Accidents occurred		
	(ii) Number of the persons affected		
	(iii) Remedial Action taken (Please attach details if any)		
	(iv) Any Fatality occurred, details.		
9.	Are you meeting the standards of air Pollution from the incinerator? How many times in last year could not met the standards?		
	Details of Continuous online emission monitoring systems installed		
10	Liquid waste generated and treatment methods in place. How many times you have not met the standards in a year?		
11	Is the disinfection method or sterilization meeting the log 4 standards? How many times you have not met the standards in a year?		
12	Any other relevant information	:	(Air Pollution Control Devices attached with the Incinerator)

Certified that the above report is for the period from

.....

Name and Signature of the Head of the Institution

Date:

Place

FORM -V

(See rule 16)

Application for filing appeal against order passed by the prescribed authority

1. Name and address of the person applying for appeal :
2. Number, date of order and address of the authority which passed the order, against which appeal is being made (certified copy of order to be attached):
3. Ground on which the appeal is being made:
4. List of enclosures other than the order referred in para 2 against which appeal is being filed:

Signature

Date :

Name and Address.....

[F. No. 3-1/2000-HSMD]

BISHWANATH SINHA, Jt. Secy.



(डॉ. एस. प्रभु)
(Dr. S. PRABHU)

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(घ) साझा जैव-चिकित्सा सुविधाओं द्वारा सूचित की गई दुर्घटनाओं की संख्या"

[फा. सं. 3-1/2000-एनएसएमडी]

रीतेश कुमार सिंह, संयुक्त सचिव

टिप्पण : मूल नियम भारत के राजपत्र, असाधारण, भाग II, खंड 3, उप-खंड (i) में दिनांक 28 मार्च, 2016 की अधिसूचना सं. सा.का.नि. 343 (अ) के अधीन प्रकाशित किए गए थे।

MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE

NOTIFICATION

New Delhi, the 16th March, 2018

G.S.R. 234 (E).— In exercise of the powers conferred by sub-section (1) and clause (v) of sub-section (2) of section 3 of the Environment (Protection) Act, 1986 (29 of 1986) read with sub-rule (4) of rule 5 of the Environment (Protection) Rules, 1986, the Central Government hereby makes the following rules to amend the Bio-Medical Waste Management Rules, 2016, published in the Gazette of India, Extraordinary, vide G.S.R. 343(E), dated the 28th March, 2016, after having dispensed with the requirement of notice under clause (a) of sub-rule (3) of rule 5 of the said rules in public interest, namely:—

1. (1) These rules may be called the Bio-Medical Waste Management (Amendment) Rules, 2018.
(2) They shall come into force on the date of their publication in the Official Gazette.
2. In the Bio-Medical Waste Management Rules, 2016 (hereinafter referred to as the principal rules), in rule 2, in sub-rule (2).—
 - (i) in clause (c), for the words, brackets and figures "Municipal Solid Waste (Management and Handling) Rules, 2000", the words and figures "Solid Waste Management Rules, 2016" shall be substituted;
 - (ii) in clause (e), for the words, brackets and figures "Hazardous Wastes (Management, Handling and Transboundary Movement) Rules, 2008", the words, brackets and figures "Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016", shall be substituted; and
 - (iii) in clause (f), for the words, brackets and figures "E-Waste (Management and Handling) Rules, 2011", the words, brackets and figures "E-Waste (Management) Rules, 2016", shall be substituted.
3. In the principal rules, in rule 4.—
 - (i) in clause (c), for the portion beginning with "or National and ending with final disposal", the following shall be substituted, namely:—
"(c), guidelines on Safe management of wastes from health care activities and WHO Blue Book, 2014 and then sent to the Common bio-medical waste treatment facility for final disposal;"
 - (ii) for clause (d), the following clause shall be substituted, namely:—
"(d) phase out use of chlorinated plastic bags (excluding blood bags) and gloves by the 27th March, 2019;"
 - (iii) in clause (i), for the words "place for any purpose within one year from the date of the notification of these rules", the words and figures "for the further treatment and disposal in accordance with the guidelines issued by the Central Pollution Control Board by 27th March, 2019" shall be substituted;
 - (iv) for clause (p), the following clause shall be substituted, namely:—
"(p) ,all the health care facilities (any number of beds) shall make available the annual report on its web-site within a period of two years from the date of publication of Bio-Medical Waste Management (Amendment) Rules, 2018;"
4. In the principal rules, in rule (5), in clause (c), for the words "within one year", the words, letters and figures "in accordance with the guidelines issued by the Central Pollution Control Board by 27th March, 2019" shall be substituted.
5. In the principal rules, in rule 7, in clause (8).—

- (a) for the words "phase out use of non-chlorinated plastic bags", the words "phase out use of chlorinated plastic bags" shall be substituted;
- (b) for the words and figures "the Plastic Waste Management Rules, 2011", the words and figures "the Plastic Waste Management Rules, 2016" shall be substituted.
6. In the principal rules, in rule 13, in sub-rule (2), for the words "Central Pollution Control Board on or before", the words, figures, brackets and letter "Central Pollution Control Board in Form IVA before" shall be substituted.
7. In the Schedule I to the principal rules,—
- (a) in the Table under part 1—
- (i) against the category yellow,—
- (A) in item (g) under column (2), after the words "body fluid", the words " routine mask and gown" shall be inserted;
- (B) against item (h), for the entry under column (3), the following entry shall be substituted, namely:—
"Autoclave or Microwave or Hydroclave safe plastic bags or containers";
- (C) against item (h), in the entry under column (4), for the portion beginning with "as per National AIDS Control Organisation", and ending with "for incineration", the following shall be substituted, namely:—
"as per World Health Organisation guidelines on Safe management of wastes from health care activities and WHO Blue Book, 2014 and thereafter sent for incineration";
- (ii) against the category blue—
- (A) against item (a), for the entry under column (3), the following item shall be substituted, namely:—
"(a) Puncture proof and leak proof boxes or containers with blue colored marking";
- (B) against item (b) for the entry under column (3), the following item shall be substituted, namely:—
"(b) Puncture proof and leak proof boxes or containers with blue colored marking";
- (iii) in the Note, for the word and figures "Schedule - III", the word and figures "Schedule - II" shall be substituted;
- (b) in Part - 2, in item (2), for the figures "10 %", the figures "1% to 2%" shall be substituted;
8. In Schedule II to the principal rules,—
- (i) in serial number 1, in the Table under Part B relating to "Emission Standards", in column heading under (3), for the letters and figure "mgNm³" the letters and figure "mg/Nm³" shall be substituted;
- (ii) in serial number 8, in item (1), the following Note shall be inserted, namely:—
"Note—
1. Above limits are applicable to the occupiers of Health Care Facilities (bedded) which are either connected with sewerage network without terminal sewage treatment plant or not connected to public sewers.
 2. For discharge into public sewers with terminal facilities, the general standards as notified under the Environment (Protection) Act, 1986 (29 of 1986) shall be applicable.
 3. Health Care Facilities having less than ten beds shall have to install Sewage Treatment Plant by the 31st December, 2019.
 4. Non-bedded occupiers shall dispose infectious liquid wastes only after treatment by disinfection as per Schedule - II (6) of the principal rules."
9. In Schedule - III to the principal rules,—
- (i) against serial number 3, in item (i) under column (3), for the brackets, word and figure "(Rule 9)", the brackets, word and figure "(Rule 10)" shall be substituted;
- (ii) against serial number 4, in item (viii) under column (3), for the brackets, word and figure "(Rule 9)", the brackets, word and figure "(Rule 12)" shall be substituted.

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10. In the principal rules, after Form IV, the following Form shall be inserted, namely:—

“Form IVA

[See rule 13(2)]

Format for Submission of the Annual Report Information on Bio-medical Waste Management (to be submitted by the State Pollution Control Boards or Pollution Control Committees and Director General Armed Forces Medical Services to Central Pollution Control Board on or before 31st July of every year for the period from January to December of the preceding calendar year)

Part-1 (Summary of Information)

- | | | | |
|--------|--|---|----------------------|
| (1) | Name of the Organisation | : | |
| (2) | Name of the Nodal Officer with contact telephone number and e-mail | : | |
| (3) | Total no. of Health Care Facilities / Occupiers | : | |
| (i) | Bedded Hospitals and Nursing Homes (bedded) | : | |
| (ii) | Clinics, dispensaries | : | |
| (iii) | Veterinary institutions | : | |
| (iv) | Animal houses | : | |
| (v) | Pathological laboratories | : | |
| (vi) | Blood banks | : | |
| (vii) | Clinical establishment | : | |
| (viii) | Research Institutions | : | |
| (ix) | AYUSH | : | |
| (4) | Total no. of beds | : | |
| (5) | Status of authorisation | : | |
| (i) | Total number of Occupiers applied for authorisation | : | |
| (ii) | Total number of Occupiers granted authorisation | : | |
| (iii) | Total number of application under consideration | : | |
| (iv) | Total number of applications rejected | : | |
| (v) | Total number of Occupiers in operation without applying for authorisation | : | |
| (6) | Quantity of Bio-medical Waste Generation (in kg/day) | : | |
| | (please enclose District Wise Bio-medical Waste Generation as per Part-2) | | |
| (i) | Bio-medical waste generation by bedded hospitals(in kg/day) | : | |
| (ii) | Bio-medical waste generation by non-bedded hospitals (in kg/day) | : | |
| (iii) | Any other | : | |
| | | | Total : _____ Kg/day |
| (7) | Bio-medical waste treatment and disposal | | |
| (a) | By Captive bio-medical waste treatment and disposal by Health Care Facilities (please enclose details as per Part-3) | | |
| (i) | Number of Health Care Facilities having captive treatment and Disposal facilities : | | |
| (ii) | Total bio-medical waste treated and disposed by captive treatment facilities in kg/day : | | |
| (b) | Bio-medical waste treatment and disposal by Common Bio Medical Waste Treatment Facilities (please enclose details as per Part 4) | | |
| (i) | Number of Common Bio Medical Waste Treatment Facilities in Operation : | | |
| (ii) | Number of Common Bio Medical Waste Treatment Facilities under construction : | | |

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THE GAZETTE OF INDIA : EXTRAORDINARY

[PART II—SEC. 3(i)]

Medical Waste Treatment Facilities with contact person name and telephone number			by Common Bio-Medical Waste Treatment Facilities	being covered		collected from member Health Care Facilities (in Kg/day)	Equipment	Numbers	Total installed capacity (kg/day)	kg/day	ties)
							Incinerator				Incineration Ash:
							Plasma Pyrolysis				Quantity: Disposed by:
							Autoclave Hydroclave				Sharps: Quantity: Disposed by:
							Microwave				Plastics: Quantity: Disposed by:
							Shredder				
							Sharps encapsulation or concrete pit				
							Deep burial pits				
							Any other equipment				
							Effluent Treatment Plant				ETP Sludge: Quantity: Disposed by:
							Sub-total				

- (a) Total Number of transportation vehicles used for collection of Bio-medical Waste on daily basis by the Common Bio-Medical Waste Treatment Facilities:
- (b) List of Health Care Facilities not having membership with the Common Bio-Medical Waste Treatment Facilities and neither having captive treatment facilities:
- (c) Number of trainings organised by the Common Bio-Medical Waste Treatment Facility operators:
- (d) Number of Accidents reported by the Common Bio Medical Waste Treatment Facilities:".

[F. No. 3-1/2000-HSMD]
RITESH KUMAR SINGH, Jt. Secy.

Note: The principal rules were published in the Gazette of India, Extraordinary, PART II—Section 3—Sub-section (i), vide G.S.R. 343(E), dated the 28th March, 2016.

"(त), सभी बिस्तरयुक्त स्वास्थ्य केन्द्रों के मामले में, (चाहे बिस्तरों की संख्या कितनी भी हो), जैव-चिकित्सा अपशिष्ट प्रबंधन (संशोधन) नियम, 2018 के प्रकाशन की तिथि से दो वर्षों की अवधि के अंदर अपनी वेबसाइट पर वार्षिक रिपोर्ट उपलब्ध कराएं;"।

3. उक्त नियमों की अनुसूची-II में, क्रम सं. 8 के सामने, मद सं. (1) में, टिप्पण में, खंड-3 के लिए, निम्नलिखित खंड प्रतिस्थापित किया जाएगा, अर्थात्:-

"3. दस बिस्तरों से कम वाले स्वास्थ्य केन्द्रों को 31 दिसम्बर, 2019 की तारीख तक द्रव अपशिष्ट पदार्थ के लिए आउटपुट स्लाव मानक का अनुपालन करना होगा।

4. उक्त नियमों की अनुसूची-III में,-

(i) क्र. सं. 3 के सामने, स्तंभ (3) में, मद सं. (vi) के पश्चात्, निम्नलिखित मद अंतर्लिखित की जाएगी, अर्थात्:-

"(vii) महानिदेशक, सशस्त्र बल चिकित्सा सेवा द्वारा प्रचालित चिकित्सा निरीक्षण (एमआई) कक्ष, जहाजों पर रोगी कक्ष या पनडुब्बी, स्टेशन चिकित्सा केन्द्र तथा अग्रिम स्थानों में स्थित क्षेत्र अस्पताल का निरीक्षण और निगरानी।"

(ii) क्र.सं. 4 के सामने, स्तंभ (3) में, मद सं. (viii) के लिए, निम्नलिखित मद अंतर्विष्ट की जाएगी, अर्थात्:-

"(vii) महानिदेशक, सशस्त्र बल चिकित्सा सेवा द्वारा प्रचालित चिकित्सा निरीक्षण (एमआई) कक्षों, जहाजों पर रोगी कक्ष या पनडुब्बी, स्टेशन चिकित्सा केन्द्रों तथा अग्रिम स्थानों में स्थित क्षेत्र अस्पतालों को छोड़कर अन्य स्वास्थ्य केन्द्रों का निरीक्षण और निगरानी (नियम-9)।"

[फा.सं.3-1/2000-एचएसएमडी]

रितेश कुमार सिंह, संयुक्त सचिव

टिप्पण : मूल नियम भारत के राजपत्र, असाधारण, भाग-II, खंड 3, उप-खंड (i) में अधिसूचना सं. सा.का.नि. 343 (अ) तारीख 28 मार्च, 2016 द्वारा प्रकाशित किए गए थे और पश्चात्वर्ती अधिसूचना सं. सा.का.नि. 234 (अ) तारीख 16 मार्च, 2018 द्वारा संशोधित किए गए थे।

MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE

NOTIFICATION

New Delhi, the 19th February, 2019

G.S.R. 129(E).—In exercise of the powers conferred by Sections 6,8 and 25 of the Environment (Protection) Act, 1986 (29 of 1986) read with sub-rule (4) of rule 5 of the Environment (Protection) Rules, 1986, the Central Government, after having dispensed with the requirement of notice under clause(a) of sub-rule (3) of rule 5 of the said rule in public interest, hereby makes the following rules further to amend the Bio-Medical Waste Management Rules, 2016, namely:-

1. (1) These rules may be called the Bio-Medical Waste Management (Amendment) Rules, 2019.
- (2) They shall come into force on the date of their publication in the Official Gazette.

2. In the Bio-Medical Waste Management Rules, 2016 (herein after referred to as the said rules), in rule 4,-
- (i) For clause (n), the following clause, shall be substituted, namely:-
- “(n) .in case of all bedded health care units, maintain and update on day to day basis the bio-medical waste management register and display the monthly record on its website according to the bio-medical waste generated in terms of category and colour coding as specified in Schedule I:”;
- (ii) For clause (p), the following clause shall be substituted, namely:-
- “(p) .in case of all bedded health care facilities (any number of beds), make available the annual report on its web-site within a period of two years from the date of publication of the Bio-Medical Waste Management (Amendment) Rules, 2018:”.
3. In Schedule II to the said rules, against serial number 8, in item (1), in the Note, for clause 3, the following clause shall be substituted, namely: -
- “3. *Health Care Facilities having less than ten beds shall have to comply with the output discharge standard for liquid waste by 31st December, 2019.*”
4. In Schedule III to the said rules, -
- (i) Against serial number 3, in column (3), after item (vi), the following item shall be inserted, namely: -
- “(vii) Inspection and monitoring of Medical Inspection (MI) rooms, sick bays onboard ships or submarines, station medical centres and field hospitals in forward locations operated by the Director General, Armed Force Medical Services.”;
- (ii) Against serial number 4, in column (3), for item (viii), the following item shall be is substituted, namely: -
- “(viii) Inspection and monitoring of health care facilities other than Medical Inspection (MI) rooms, sick bays on board ships or submarines, station medical centres and field hospitals in forward locations operated by the Director General, Armed Forces Medical Services (Rule-9).”.

[F. No. 3-1/2000-HSMD]
RITESH KUMAR SINGH, Jt. Secy.

Note : The Principal rules were published in the Gazette of India, Extraordinary, Part II, Section 3, Sub-section (i), vide number G.S.R. 343(E), dated the 28th March, 2016 and subsequently amended vide number G.S.R. 234(E), dated the 16th March, 2018.

टिप्पण : मूल नियम भारत के राजपत्र, असाधारण, भाग-II, खंड 3, उप-खंड (i) में अधिसूचना सं. सा.का.नि. 343 (अ) तारीख, 28 मार्च, 2016 द्वारा प्रकाशित किए गए थे और तत्पश्चात इनमें अधिसूचना सं. सा.का.नि. 234 (अ) तारीख 16 मार्च, 2018 और सं. सा.का.नि. 129 (अ) 19 फरवरी, 2019 द्वारा संशोधन किए गए थे।

MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE

NOTIFICATION

New Delhi, the 10th May, 2019

G.S.R. 360(E).—In exercise of the powers conferred by Sections 6, 8 and 25 of the Environment (Protection) Act, 1986 (29 of 1986) read with sub-rule (4) of rule 5 of the Environment (Protection) Rules, 1986, the Central Government, after having dispensed with the requirement of notice under clause (a) of sub-rule (3) of rule 5 of the said rule in public interest, hereby makes the following rules further to amend the Bio-Medical Waste Management Rules, 2016, namely:—

1. (1) These rules may be called the Bio-Medical Waste Management (Second Amendment) Rules, 2019.
(2) They shall come into force on the date of their publication in the Official Gazette.
2. In the Bio-Medical Waste Management Rules, 2016 (hereinafter referred to as the said rules), in rule 4, in clause (d), the following Explanation shall be inserted, namely:—
“**Explanation.**— For removal of doubts, it is hereby clarified that the expression “Chlorinated plastic bags” shall not include urine bags, effluent bags, abdominal bags and chest drainage bags.”.
3. In Schedule III to the said rules, against serial number 3, in column (3), in item (viii), for the brackets and letters “(viii)”, the brackets and letters “(vii)” shall be substituted.

[F. No. 3-1/2000-HSMD]

ARVIND KUMAR NAUTIYAL, Jt. Secy.

Note: The principal rules were published in the Gazette of India, Extraordinary, Part II, Section 3, Sub-section (i), *vide* number G.S.R. 343(E), dated the 28th March, 2016 and subsequently amended *vide* number G.S.R. 234(E), dated the 16th March, 2018 and number G.S.R. 129(E), dated the 19th February, 2019.



(डॉ. एस. प्रभु)
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Min. of Environment, Forest and Climate Change
भारत सरकार, नई दिल्ली
Govt. of India, New Delhi

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भारत का राजपत्र The Gazette of India

असाधारण

EXTRAORDINARY

भाग II—खण्ड 3—उप-खण्ड (i)

PART II—Section 3—Sub-section (i)

प्राधिकार से प्रकाशित

PUBLISHED BY AUTHORITY

सं. 113]

नई दिल्ली, बुधवार, फरवरी 20, 2019/फाल्गुन 1, 1940

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NEW DELHI, WEDNESDAY, FEBRUARY 20, 2019/PHALGUNA 1, 1940

MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE

NOTIFICATION

New Delhi, the 19th February, 2019

G.S.R. 129(E).—In exercise of the powers conferred by Sections 6.8 and 25 of the Environment (Protection) Act, 1986 (29 of 1986) read with sub-rule (4) of rule 5 of the Environment (Protection) Rules, 1986, the Central Government, after having dispensed with the requirement of notice under clause(a) of sub-rule (3) of rule 5 of the said rule in public interest, hereby makes the following rules further to amend the Bio-Medical Waste Management Rules, 2016, namely:-

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 - (i) For clause (n), the following clause, shall be substituted, namely:-
“(n) ,in case of all bedded health care units, maintain and update on day to day basis the bio-medical waste management register and display the monthly record on its website according to the bio-medical waste generated in terms of category and colour coding as specified in Schedule I;”
 - (ii) For clause (p), the following clause shall be substituted, namely:-
“(p) ,in case of all bedded health care facilities (any number of beds), make available the annual report on its web-site within a period of two years from the date of publication of the Bio-Medical Waste Management (Amendment) Rules, 2018;”
3. In Schedule II to the said rules, against serial number 8, in item (1), in the Note, for clause 3, the following clause shall be substituted, namely: -
“3. Health Care Facilities having less than ten beds shall have to comply with the output discharge standard for liquid waste by 31st December, 2019.”
4. In Schedule III to the said rules, -
 - (i) Against serial number 3, in column (3), after item (vi), the following item shall be inserted, namely: -
“(vii) Inspection and monitoring of Medical Inspection (MI) rooms, sick bays onboard ships or submarines, station medical centres and field hospitals in forward locations operated by the Director General, Armed Force Medical Services.”;
 - (ii) Against serial number 4, in column (3), for item (viii), the following item shall be substituted, namely: -
“(viii) Inspection and monitoring of health care facilities other than Medical Inspection (MI) rooms, sick bays on board ships or submarines, station medical centres and field hospitals in forward locations operated by the Director General, Armed Forces Medical Services (Rule-9).”

[F. No. 3-1/2000-HSMD]
RITESH KUMAR SINGH, Jt. Secy.

Note : The Principal rules were published in the Gazette of India, Extraordinary, Part II, Section 3, Sub-section (i), vide number G.S.R. 343(E), dated the 28th March, 2016 and subsequently amended vide number G.S.R. 234(E), dated the 16th March, 2018.

(डॉ. एस. प्रभु)

(Dr. S. PRABHU)

वैज्ञानिक 'डी'/Scientist 'D'

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Min.of Environment, Forest and Climate Change

भारत सरकार, नई दिल्ली

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असाधारण

EXTRAORDINARY

भाग II—खण्ड 3—उप-खण्ड (i)

PART II—Section 3—Sub-section (i)

प्राधिकार से प्रकाशित

PUBLISHED BY AUTHORITY

सं. 300]	नई दिल्ली, सोमवार, मई 13, 2019/वैशाख 23, 1941
No. 300]	NEW DELHI, MONDAY, MAY 13, 2019/VAISAKHA 23, 1941

पर्यावरण, वन और जलवायु परिवर्तन मंत्रालय

अधिसूचना

नई दिल्ली, 10 मई, 2019

सा.का. नि. 360(अ).—पर्यावरण (संरक्षण) नियम, 1986 के नियम 5 के उप-नियम (4) के साथ पठित पर्यावरण (संरक्षण) अधिनियम, 1986 (1986 का 29) की धारा 6, 8 और 25 द्वारा प्रदत्त शक्तियों का प्रयोग करते हुए, केंद्रीय सरकार उक्त नियम के नियम 5 के उप-नियम (3) के खंड (क) के अधीन जनहित में दी गई सूचना की अपेक्षा को समाप्त करने के पश्चात, जैव-चिकित्सा अपशिष्ट प्रबंधन नियम, 2016 का और संशोधन करने के लिए निम्नलिखित नियम बनाती है, अर्थात्:—

- (1) इन नियमों का संक्षिप्त नाम जैव-चिकित्सा अपशिष्ट प्रबंधन (दूसरा संशोधन) नियम, 2019 है।
(2) ये राजपत्र में इनके प्रकाशन की तारीख को प्रवृत्त होंगे।
- जैव-चिकित्सा अपशिष्ट प्रबंधन नियम, 2016 (जिसे इसमें इसके पश्चात् उक्त नियम कहा गया है) के नियम 4 में, खण्ड (घ) में, निम्नलिखित स्पष्टीकरण अन्तःस्थापित किया जाएगा, अर्थात्:—
“स्पष्टीकरण – शंकाओं के दूर करने के लिए यह स्पष्ट किया जाता है कि “क्लोरीनीकृत प्लास्टिक थैलियों” अभिव्यक्ति में मूत्र थैलियां, बहिःस्राव थैलियां, उदरीय थैलियां और वक्षीय जल निकास थैलियां सम्मिलित नहीं होंगी।”
- उक्त नियमों की अनुसूची 3 की क्रम सं. 4 के सामने, स्तंभ (3) की मद सं. (vii) में, जो “महानिदेशक, सशस्त्र बल चिकित्सा सेवा द्वारा प्रचालित चिकित्सा निरीक्षण (एमआइ) कक्षों, जहाजों पर रोगी कक्ष या पनडुब्बी, स्टेशन चिकित्सा केन्द्रों तथा अग्रिम स्थानों में स्थित क्षेत्र अस्पतालों को छोड़कर अन्य स्वास्थ्य केन्द्रों का निरीक्षण और निगरानी (नियम 9)” में “(vii)” कोष्ठक और अंक के स्थान पर “(viii)” कोष्ठक और अंक रखे जाएंगे।

[फा.सं. 3-1/2000-एचएसएमडी]

अरविन्द कुमार नौटियाल, संयुक्त सचिव

टिप्पण : मूल नियम भारत के राजपत्र, असाधारण, भाग-II, खंड 3, उप-खंड (i) में अधिसूचना सं. सा.का.नि. 343 (अ) तारीख, 28 मार्च, 2016 द्वारा प्रकाशित किए गए थे और तत्पश्चात इनमें अधिसूचना सं. सा.का.नि. 234 (अ) तारीख 16 मार्च, 2018 और सं. सा.का.नि. 129 (अ) 19 फरवरी, 2019 द्वारा संशोधन किए गए थे।

**MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE
NOTIFICATION**

New Delhi, the 10th May, 2019

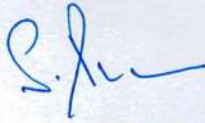
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1. (1) These rules may be called the Bio-Medical Waste Management (Second Amendment) Rules, 2019.
(2) They shall come into force on the date of their publication in the Official Gazette.
2. In the Bio-Medical Waste Management Rules, 2016 (hereinafter referred to as the said rules), in rule 4, in clause (d), the following Explanation shall be inserted, namely:—
“Explanation.- For removal of doubts, it is hereby clarified that the expression “Chlorinated plastic bags” shall not include urine bags, effluent bags, abdominal bags and chest drainage bags.”
3. In Schedule III to the said rules, against serial number 3, in column (3), in item (viii), for the brackets and letters “(viii)”, the brackets and letters “(vii)” shall be substituted.

[F. No. 3-1/2000-HSMD]

ARVIND KUMAR NAUTIYAL, Jt. Secy.

Note: The principal rules were published in the Gazette of India, Extraordinary, Part II, Section 3, Sub-section (i), *vide* number G.S.R. 343(E), dated the 28th March, 2016 and subsequently amended *vide* number G.S.R. 234(E), dated the 16th March, 2018 and number G.S.R. 129(E), dated the 19th February, 2019.



(डॉ. एस. प्रभु)
(Dr. S. PRABHU)
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भारत सरकार, नई दिल्ली
Govt. of India, New Delhi

HSM-20/4/2021-HSM

846350/2023/HSM

नरेश पाल गंगवार, आई.ए.एस.
Naresh Pal Gangwar, IAS



अपर सचिव
भारत सरकार
पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय
ADDITIONAL SECRETARY
GOVERNMENT OF INDIA
MINISTRY OF ENVIRONMENT, FOREST
AND CLIMATE CHANGE

D.O. No. 20/4/2021-HSMD

Dated: 14th October, 2022

Respected Sir,

The Ministry of Environment, Forest and Climate Change (MoEFCC) is administering the Bio-medical Waste Management (BMWM) Rules, 2016 for scientific disposal of BMW. Further, to assist stakeholders in the implementation of the BMWM Rules, 2016, the Central Pollution Control Board (CPCB) has also formulated various guidelines.

2. I would like to emphasize here that the purpose of these rules is to uniformly implement its provisions across the country with support of various stakeholders like the Ministry of Health and Family Welfare, State Health Department, State Pollution Control Boards/ Pollution Control Committees (SPCBs/ PCCs), Occupiers (waste generators), Common Bio-Medical Waste Treatment Facility Operators (CBWTFs) etc. In this regard, it is noteworthy to mention here the important role played by various stakeholders and facilities during the COVID-19 pandemic period towards effective management of COVID-19 waste.

3. May I highlight here that the Ministry often comes across media reports, and receive representations from civil society/ stakeholder groups on non-compliance of BMWM Rules, 2016/ CPCB Guidelines. The major issues highlighted in such complaints are related to unscientific/ non-compliant functioning of Healthcare Facilities (HCFs)/ CBWTFs, lack of gap-analysis studies & monitoring by SPCBs/ PCCs, non-consideration of gap-analysis reports while grant of environmental clearances by SEIAA, illegal dumping of BMW by HCFs/ CBWTFs, earmarking of HCFs for BMW treatment to CBWTFs against distance criteria etc. It is to be noted that new facilities may be allowed on the basis of gap analysis by SPCBs wherever required.

4. In light of the above, I would request you to intervene in the matter and ensure that gap-analysis studies and BMWM Rules, 2016/ CPCB guideline provisions must become the one of the fundamental grounds of granting ECs to HCFs/ CBWTFs. Further, the SPCBs/ PCCs may be directed to ensure effective monitoring of CBWTFs and ensure that all CBWTFs within their jurisdiction come under the ambit of Online Continuous Emission Monitoring System and connect with CPCB server. In case of insufficient capacity, proper gap analysis be made and new facilities may be allowed. If required, the non-compliant entities can be penalized, and asked to deposit of requisite environmental compensation.

With regards,

Yours sincerely,

(Naresh Pal Gangwar)

Shri Manoj Singh
Principal Secretary,
Environment, Forest and
Climate Change Department,
Government of Uttar Pradesh,
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846350/2023/HSM

HSM-20/4/2021-HSM

नरेश पाल गंगवार, आई.ए.एस.
Naresh Pal Gangwar, IAS



अपर सचिव
भारत सरकार
पर्यावरण वन एवं जलवायु परिवर्तन मंत्रालय
ADDITIONAL SECRETARY
GOVERNMENT OF INDIA
MINISTRY OF ENVIRONMENT FOREST
AND CLIMATE CHANGE

D.O. No. 20/4/2021-HSMD

Dated: 18th October, 2022

Respected Sir,

The Ministry of Environment, Forest and Climate Change (MoEFCC) is administering the Bio-medical Waste Management (BMW) Rules, 2016 for scientific disposal of BMW. Further, to assist stakeholders in the implementation of the BMW Rules, 2016, the Central Pollution Control Board (CPCB) has also formulated various guidelines. The purpose of these rules is to uniformly implement its provisions across the country with support of various stakeholders like the Ministry of Health and Family Welfare, State Health Department, State Pollution Control Boards/ Pollution Control Committees (SPCBs/ PCCs), Occupiers (waste generators), Common Bio-Medical Waste Treatment Facility Operators (CBWTFs) etc.

2. May I highlight here that the Ministry often comes across media reports, and receive representations from civil society/ stakeholder groups on non-compliance of BMW Rules, 2016/ CPCB Guidelines. The major issues highlighted in such complaints are related to unscientific/ non-compliant functioning of Healthcare Facilities (HCFs)/ CBWTFs, lack of gap-analysis studies & monitoring by SPCBs/ PCCs, non-consideration of gap-analysis reports while grant of environmental clearances by SEIAA, illegal dumping of BMW by HCFs/ CBWTFs, earmarking of HCFs for BMW treatment to CBWTFs against distance criteria etc.

3. In compliance to the Hon'ble NGT's directions in the matter of O.A. No. 180 of 2021 (Mukul Kumar vs. Uttar Pradesh Pollution Control Board & Ors.), the Ministry had coordinated with CPCB for preparation of a 'Standard Monitoring Framework', which has been submitted to Hon'ble NGT. The provisions of framework aim to facilitate SPCBs/ PCCs in compliance monitoring of HCFs/ CBWTFs. A copy of the same is attached for implementation.

4. In light of the above, I would request you to intervene in the matter and ensure that compliance to BMW Rules, 2016/ CPCB guideline provisions must become the fundamental ground for grant/ renewal of consent and authorization to HCFs/ CBWTFs. All the CBWTFs be brought under the ambit of Online Continuous Emission Monitoring System and connect with CPCB server. In case of insufficient BMW treatment capacity, proper gap analysis be undertaken, and new facilities may be allowed. Further, non-compliant entities be penalized, and asked to deposit requisite environmental compensation.

With regards,

Yours sincerely,

(Naresh Pal Gangwar)

Shri Manoj Singh,
Chairman
Uttar Pradesh Pollution Control Board,
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D.O. No. 20/4/2021-HSMD

अपर सचिव
भारत सरकार
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ADDITIONAL SECRETARY
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AND CLIMATE CHANGE

Dated: 18th October, 2022

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2. May I highlight here that the Ministry often comes across media reports, and receive representations from civil society/ stakeholder groups on non-compliance of BMWM Rules, 2016/ CPCB Guidelines. The major issues highlighted in such complaints are related to unscientific/ non-compliant functioning of Healthcare Facilities (HCFs)/ CBWTFs, lack of gap-analysis studies & monitoring by SPCBs/ PCCs, non-consideration of gap-analysis reports while grant of environmental clearances by State Environment Impact Assessment Authorities (SEIAA), illegal dumping of BMW by HCFs/ CBWTFs, earmarking of HCFs for BMW treatment to CBWTFs against distance criteria etc.

3. In light of the above, I would request you to intervene in the matter and ensure that the grant of ECs by the SEIAA must be based on gap analysis studies undertaken by the concerned SPCBs/ PCCs duly highlighting the difference in the BMW generated vis-à-vis the treatment capacity available.

With regards,

Yours sincerely,

(Naresh Pal Gangwar)

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(डॉ. एस. प्रभु)
(Dr. S. PRABHU)

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आज़ादी का
अमृत महोत्सव

Revised Guidelines for Common Bio-medical Waste Treatment and Disposal Facilities



CENTRAL POLLUTION CONTROL BOARD

(Ministry of Environment, Forest and Climate Change)

Parivesh Bhawan, East Arjun Nagar

DELHI -110 032

website: www.cpcb.nic.in

(December 21, 2016)



Abbreviations

APCD	-	Air Pollution Control Device
BMWM Rules	-	Bio-medical Waste Management Rules
CBWTF	-	Common Bio-medical Waste Treatment and Disposal Facility
CO	-	Carbon Monoxide
CO ₂	-	Carbon Dioxide
CPCB	-	Central Pollution Control Board
CRZ	-	Coastal Regulation Zone
DG	-	Diesel Generator
EC	-	Environmental Clearance
EIA	-	Environment Impact Assessment
ETP	-	Effluent Treatment Plant
GPS	-	Global Positioning System
HCFs	-	Health Care Facilities
HCl	-	Hydrochloric Acid
HOWM & TM Rules	-	Hazardous and Other Waste (Management & Transboundary Movement) Rules, 2016
MHz	-	Mega Hertz
MoEF& CC	-	Ministry of Environment, Forest & Climate Change
KM	-	Kilometer
KW	-	Kilowatt
MoU	-	Memorandum of Understanding
NABL	-	National Accreditation Board for Testing and Laboratories
NO _x	-	Oxides of Nitrogen
O ₂	-	Oxygen
PCC	-	Pollution Control Committee
PLC	-	Programmable Logical Control
SEIAA	-	State Environment Impact Assessment Authority
SLF	-	Secured Landfill
SPCB	-	State Pollution Control Board
TSDF	-	Treatment Storage and Disposal Facility
TOC	-	Total Organic Carbon
VOCs	-	Volatile Organic Compounds

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1) Introduction

A Common Bio-medical Waste Treatment and Disposal Facility (CBWTF) is a set up where biomedical waste generated from member health care facilities is imparted necessary *treatment* to reduce adverse effects that this waste may pose on human health and environment. The treated recyclable waste may finally be sent for disposal in a secured landfill or for recycling.

According to the Bio-medical Waste Management Rules, 2016, "*bio-medical waste treatment and disposal facility*" means any facility wherein treatment, disposal of bio-medical waste or processes incidental to such treatment and disposal is carried out, and includes common bio-medical waste treatment facilities and "*operator of a common bio-medical waste treatment facility*" means a person who owns or controls a Common Bio-medical Waste Treatment and Disposal Facility (CBWTF) for the collection, reception, storage, transport, treatment, disposal or any other form of handling of bio-medical waste.

The Bio-medical Waste Management Rules, 2016 (hereafter referred as BMWM Rules) restricts occupier for establishment of on-site or captive bio-medical waste treatment and disposal facility, if a service of common bio- medical waste treatment and disposal facility is available within a distance of seventy-five kilometer, as installation of individual treatment facility by health care facility (HCF) requires comparatively high capital investment. In addition, it requires separate dedicated and trained skilled manpower and infrastructure development for proper operation and maintenance of treatment systems. The concept of *CBWTF* is not only addresses such problems but also prevents proliferation of treatment technologies in a particular town or city. In turn, it reduces the monitoring pressure on regulatory agencies. By running the treatment equipment at CBWTF to its full capacity, the cost of treatment of per kilogram bio-medical waste gets significantly reduced. Its considerable advantages have made CBWTF popular and proven concept in most part of the world.

The CBWTFs are also required to set up based on the need for ensuring environmentally sound management of bio-medical waste keeping in view the techno-economic feasibility and viable operation of the facility with minimal impact on human health and environment.

Since 1998, the CBWTF as an option for treatment of bio-medical waste also been legally introduced in India. Considering the likely impacts that may cause to the patients undergoing treatment because of operation of the captive treatment

equipment within the health care facilities (HCFs), now the Bio-medical Waste Management Rules, 2016 restricts the Occupier (i.e., HCF) for ensuring treatment and disposal of generated bio-medical waste through a CBWTF, located within a distance of 75 KM. Further, these rules eased the bottleneck in upbringing the CBWTF by making department in the business allocation of land assignment in the State or UT administration responsible for providing a suitable site (s) within its jurisdiction.

The concept of CBWTF is also being widely accepted in India among the healthcare units, medical associations and entrepreneurs. In order to set up a CBWTF to its maximum perfection, care shall be taken in choosing the right technology, development of CBWTF area, proper designing of transportation system to achieve optimum results etc. Key features of CBWTF have been addressed in the subsequent sections.

To facilitate the treatment and disposal of bio-medical waste generated from the HCFs, at present (as per Annual Report 2014 submitted by the SPCBs/PCCs), there are 192 no. of CBWTFs in operation and 33 no. of CBWTFs are under construction. Also, the Bio-medical Waste Management Rules, 2016 mandates that the operator of a CBWTF authorised by the prescribed authority is required to take all necessary steps to ensure that the bio-medical waste collected from the occupier is transported, handled, stored, treated and disposed of, without any adverse effect to the human health and the environment, in accordance with the BMWM Rules and the guidelines issued by the Central Government or the Central Pollution Control Board (CPCB) from time to time. Therefore, these guidelines have been prepared with an aim to have uniformity in ensuring site selection, allowing and establishment of a state-of-the-art CBWTF, operation as well as verification of compliance to the BMWM Rules, 2016 throughout the country. However, any other aspects which are not been covered under these guidelines and needs attention, in such a case, the prescribed authority may take suitable action in the interest of protection of the environment in consultation with MoEF & CC/CPCB. Also, it is pertinent to mention here that these guidelines are mandatory henceforth under the Bio-medical Waste Management Rules, 2016

2) Criteria for development of a new Common Bio-medical Waste Treatment and Disposal Facility for a locality or region.

Prior to allowing any new CBWTF, following criteria or steps may be followed:

- a) Prescribed authority under the BMWM Rules, 2016 [i.e., State Pollution Control Board (SPCB) in the respective State or Pollution Control Committee (PCC) in the respective

Union Territory Administration] is required to prepare an inventory or review with regard to the bio-medical waste generation at least once in five years in the coverage areas of the existing bio-medical waste treatment and disposal facility. The prescribed authority is also required to extrapolate the coverage-area wise bio-medical waste generation for the next ten years.

- b) SPCB/PCC is required to conduct gap analysis w.r.to coverage area of the bio-medical waste generation and also projected over a period of next ten years, adequacy of existing treatment capacity of the CBWTF in each coverage area of radius 75 KM, as given in **Annexure-I**.

All the SPCBs and PCCs shall conduct the gap analysis and based on the gap analysis, action plan for development of new CBWTFs is required to be prepared and submitted to MoEF & CC & CPCB within six months' time. In case of States/UTs, where no CBWTF is available, in such a case, SPCB/PCC being prescribed authority under the BMW Rules is required to submit the detailed proposal to MoEF & CC/MoH & FW through the respective State Government or UT Administration. Also, the option of forming association by the group of health care facilities (HCFs) to develop their own CBWTF also be encouraged following these guideline. In case, any coverage area requires additional treatment capacity, in such a case, action may be initiated by the prescribed authority for allowing a new CBWTF in that locality without interfering the coverage area of the existing CBWTF and beds covered by the existing CBWTF.

- c) SPCB/PCC shall identify the coverage area, which require additional treatment facility and bring it to the notice of the concerned department in the business allocation of land assignment in the respective State Government or UT Administration. The department in the business allocation of land assignment shall be responsible for providing suitable site in the identified coverage area for setting up of a CBWTF, in consultation with the prescribed authority (i.e., SPCB/PCC), other stakeholders and in accordance with these guidelines issued by CPCB from time to time.
- d) Alternately, a CBWTF may also be allowed to be established on a land procured by an entrepreneur in accordance with the location criteria suggested under these guidelines.
- e) The SPCB/PCC or concerned department in the business allocation of land assignment in the respective State Government or UT Administration may seek expression of interest from the proponents for development of new CBWTF (s) in the identified coverage area. Upon allocation of site to the proponent, the proponent is
-

required to take necessary approvals as required under the Environment (Protection) Act, 1986 for development of the new CBWTF in accordance with these guidelines.

- f) In the absence of expression of interest by any proponent, then SPCB/PCC shall insist health care facilities to form association and to develop its own CBWTF in line with these guidelines or to have captive treatment facilities for ensuring treatment and disposal of generated bio-medical waste as stipulated under the BMW Rules, 2016.
- g) In case of any regulatory action including closure of any existing CBWTF is inevitable, the respective SPCB/PCC may take action under the BMW Rules including for making alternate arrangement to ensure safe disposal of the bio-medical waste generated from the member health care facilities of such default CBWTF through CBWTF located nearby.
- h) In case of hilly areas considering the geography, only one CBWTF with adequate treatment capacity may be developed covering atleast two districts to cater treatment services to the HCFs located in the respective Districts. The selection and allocation of site etc., should be done as per the criteria suggested under these guidelines. The treatment charges to be prescribed by the respective SPCB/PCC in consultation with the State Advisory Committee.

The criteria for development of CBWTFs in any coverage area is also depicted in **Figure 1**.

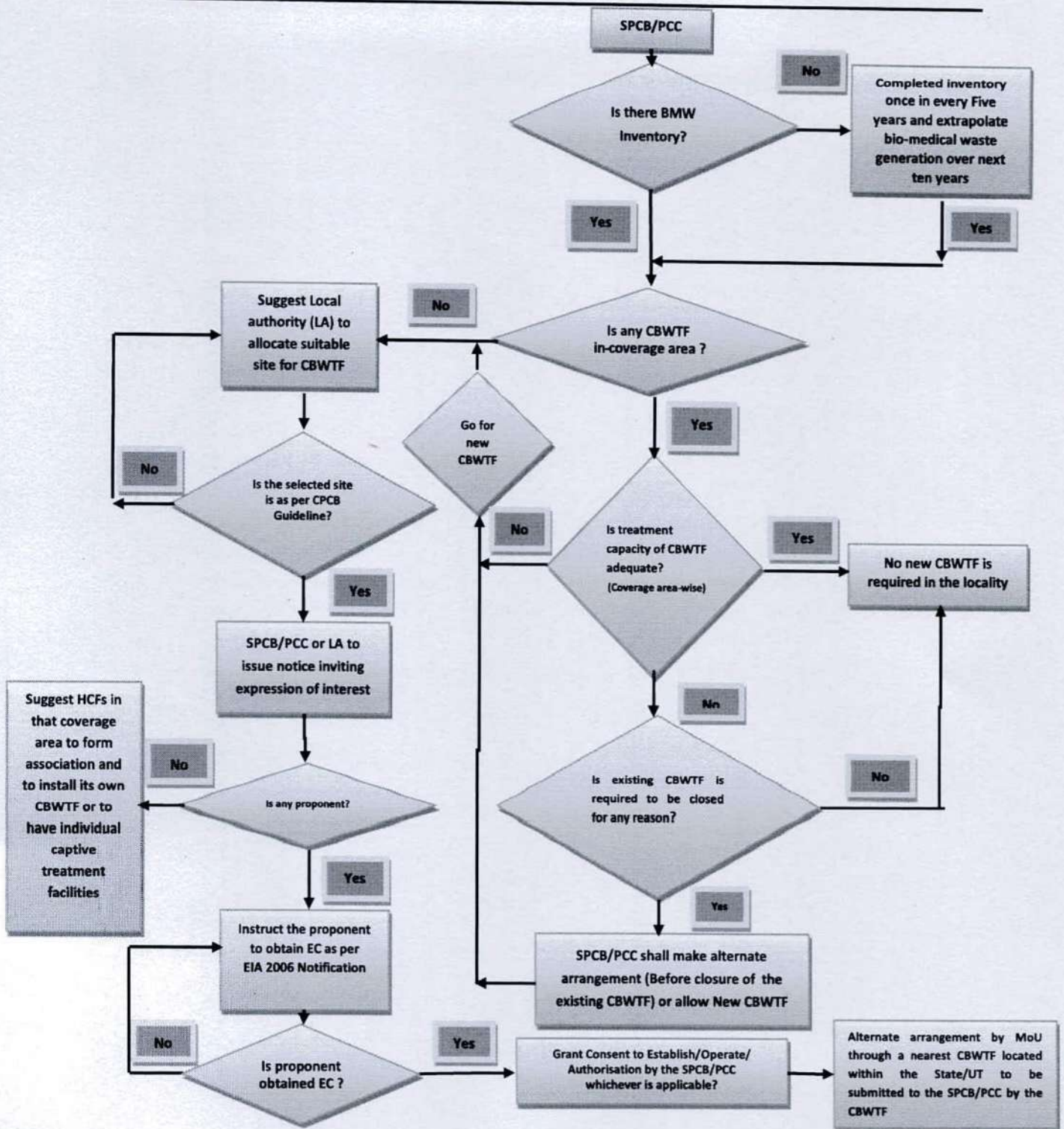


Figure 1. Criteria for Development of a CBWTF in a coverage area

3) Duties of the operator of a common bio-medical waste treatment and disposal facility

The duties of the operator of a common bio-medical waste treatment and disposal facility (CBWTF) as enunciated under Rule 5 of the Bio-medical Waste Management Rules, 2016 shall be ensured and complied with. Also, all the existing CBWTFs shall also complete augmentation of the existing incineration facility so as to comply w.r.to the residence time as well as emission norms including for Dioxins and Furans prescribed under BMWM Rules, 2016 within two years from the date of notification of the BMWM Rules, 2016 (i.e., prior to 27.03.2018). In addition to the above, to ensure proper management of bio-medical waste in the respective coverage area, as a mitigation measure, especially in the event of

- (a) a temporary break down (not more than a week) of a CBWTF especially for rectification of the refractory lining of the incineration chambers or change of requisite APCD due to failure; and
- (b) Closure of a CBWTF for violation of the provisions of the BMWM Rules or any other reason.

Prior to commencement of a new CBWTF as well as all the existing CBWTF Operators are required to submit action plan, to the respective SPCB/PCC, for imposing suitable condition while granting authorisation under the BMWM Rules, 2016. The action plan should also include:

- (a) a MoU made with the nearest CBWTF located within the respective State/UT, as alternate arrangement. In case, if there is no CBWTF located nearby then such CBWTF should have to install stand by treatment equipment (equal to the existing treatment capacity as per consents granted by the SPCB/PCC), and
- (b) decontamination plan of the CBWTF for execution of such plan prior to closure of a CBWTF.

4) Applicability of these guidelines

These guidelines are applicable to all the upcoming or new CBWTFs. In case of the existing CBWTFs, these guidelines shall be applicable in case

- (a) the existing CBWTFs desires to expand or enhance the existing treatment capacity
(or)
 - (b) the existing CBWTFs desires to modernize the existing treatment equipment with the new equipment with enhancement in the existing treatment capacity.
-

5) **Environmental laws applicable for commissioning or operation of a CBWTF**

Operation of a CBWTF leads to air emissions as well as waste water generation as in case of an industrial operation. Most common sources of waste water generation in CBWTFs are vehicle washing, floor washing, and scrubbed liquid effluent from air pollution control systems attached with the incinerator/plasma pyrolysis. Incineration as well as DG Set is the general source of air emissions.

5.1 Any other approvals (such as Land Use /Change in Land Use as applicable) required from the concerned authorities under various laws have to be complied with by the proponent of the CBWTF prior to development of a CBWTF-

5.2 Consents under Water (Prevention and Control of Pollution) Act, 1974 and Air (Prevention and Control of Pollution) Act, 1981 as well as Authorization under the BMWM Rules, 2016

The project proponent of the CBWTF is required to obtain 'Consent to Establishment' under Rule 25 of the Water (Prevention and Control of Pollution) Act, 1974 and under Rule 21 of the Air (Prevention and Control of Pollution) Act, 1981, from the respective prescribed authority i.e. SPCB/PCC. Upon installation of the requisite equipment, the CBWTF Operator is also required to obtain authorization under BMWM Rules, 2016 co-terminus with consent to operate under Water (Prevention and Control of Pollution) Act, 1976 & Air (Prevention and Control of Pollution) Act, 1981 from the respective SPCB/PCC prior to commencement of the CBWTF.

5.3 Environmental Clearance under EIA Notification 2006

Ministry of Environment, Forest & Climate Change (MoEF & CC), notified amendment to the EIA Notification 2006 and published vide MoEF & CC Notification of S.O. 1142 (E) dated April 17, 2015. According to this notification, the 'bio-medical waste treatment facility' is categorized under the Item 7 (da) in the schedule, requiring 'environmental clearance' from the State Environment Impact Assessment Authority (SEIAA). Therefore, the CBWTF operator is also required to obtain 'Environmental Clearance (EC)' from the respective SEIAA or Ministry of Environment, Forest & Climate Change (MoEF & CC), as the case may be, before any construction work, or preparation of land by the projects management, which include the following:

- a) All new projects or activities pertaining to the bio-medical waste treatment facility; and
- b) Expansion and modernization with additional treatment capacity of existing bio-medical waste treatment facility (excluding augmentation of incineration facility

for compliance to the residence time as well as Dioxins and Furans without enhancing the existing treatment capacity).

- c) Any expansion or modification in the treatment capacity or relocation of the existing CBWTF (requires compliance to the relevant provisions notified under the Environment (Protection) Act, 1986 by the MoEF & CC

6) Location criteria

In the context of these guidelines, buffer zone represents a separation distance between the source of pollution in CBWTF and the receptor - following the principle that the degree of impact reduces with increased distance. The following parameters may be considered for ascertaining buffer distance on case-to-case basis:

- (i) potential for spread of infection from wastes stored in the premises.
- (ii) applicable standards for pollution control and the relative efficiency of the existing incinerators and emission control systems,
- (iii) potential of fugitive dust emission from incinerators,
- (iv) potential for discharge of wastewater
- (v) the potential for odour production,
- (vi) the potential for noise pollution,
- (vii) the risk posed to human health and safety due to exposure to emissions from incinerator,
- (viii) the risk of fire and
- (ix) Significance of the residual impacts such as bottom ash and fly ash.

As far as possible, the CBWTF shall be located near to its area of operation in order to minimize the transportation distance in waste collection, thus enhancing its operational flexibility as well as for ensuring compliance to the time limit for treatment and disposal of bio-medical waste as stipulated under the BMW Rules (i.e., within 48 hours). Also, the location of the CBWTF should be in conformity to the CRZ Norms and other provisions notified under the Environment (Protection) Act, 1986. The location shall be decided in consultation with the State Pollution Control Board (SPCB)/ Pollution Control Committee (PCC). The location criteria for development of a CBWTF are as follows:

- (a) A CBWTF shall preferably be developed in a notified industrial area without any requirement of buffer zone **(or)**
 - (b) A CBWTF can be located at a place reasonably far away from notified residential and sensitive areas and should have a buffer distance of preferably 500 m so that it shall
-

have minimal impact on these areas. In case of non-availability of such a land, the buffer zone distance from the notified residential area may be reduced to less than 500 m by SPCB/PCC without referring the matter to CPCB by prescribing additional control measures such as (i) adoption of best available technologies (BAT) by the proponent of CBWTF; (ii) prescribing stringent standards for operation of the CBWTF by the SPCB/PCC; (iii) adoption of zero liquid discharge by the CBWTF and (iv) in case of any complaints from the public, then CBWTF should prove that the facility is not causing any adverse impact on environment and habitation in the vicinity. If SPCB/PCC is not in a position to resolve the issue relating to buffer zone while selecting the site for CBWTFs, in such a case, SPCBs/PCCs may refer the matter to CPCB.

- (c) The CBWTF can also be developed as an integral part of the Hazardous Waste Treatment Storage and Disposal Facility (TSDF) subject to obtaining of necessary approvals from the authorities concerned including 'environmental clearance' as per Environmental Impact Assessment 2006 and further amendments notified under the Environment (Protection) Act, 1986, provided there is no CBWTF exist within 150 KM distance from the existing TSDF.

7) Land requirement

Sufficient land shall be allocated to the CBWTF to provide all requisite systems which include dedicated space for storage of waste (both treated and untreated), waste treatment equipment, vehicle washing bay, vehicle parking space, ETP, incineration ash storage provision, administrative room, space for DG Set etc.,.

- (a) Preferably, a CBWTF shall be set up on a plot size of not less than one acre in all the areas. However, a CBWTF can be developed in adjacent plots but cannot be set up in two or more different plots located in different areas. Separate plots can be permitted only for vehicle parking if located in the close vicinity of the proposed CBWTFs or the existing CBWTFs.
- (b) In case of upcoming or new CBWTFs (both in municipal limits with population more than 25 lakhs or in rural areas), the land area requirement may be relaxed (but in any case not less than 0.5 acre) by the SPCB/PCC, with additional control measures such as zero liquid discharge, increase in stack height, stringent emission norms, odour control measures or any other measures felt necessary by the prescribed authority on case-to-case basis, only in consultation with CPCB.

8) Coverage area of CBWTF

Suggested coverage area for development of a CBWTF is as follows:

- a) A CBWTF located within the respective State/UT shall be allowed to cater healthcare units situated at a radial distance of 75 KM. However, in a coverage area where 10,000 beds are not available within a radial distance of 75 KM, existing CBWTF in the locality (located within the respective State/UT) may be allowed to cater the healthcare units situated upto 150 KM radius w.r.to its location provided the bio-medical waste generated is collected, treated and disposed of within 48 hours as stipulated under the BMWM Rules.
- b) In case, number of beds is exceeding >10,000 beds in a locality (i.e. coverage area of the CBWTF under reference) and the existing treatment capacity is not adequate, in such a case, a new CBWTF may be allowed in such a locality in compliance to various provisions notified under the Environment (Protection) Act, 1986, to cater services only to such additional bed strength of the HCFs located.
- c) In case of hilly areas, considering the geography, only one CBWTF with adequate treatment capacity may be developed covering atleast two districts to cater treatment services to the HCFs located in the respective Districts. The selection and allocation of site etc. should be done as per the criteria suggested under these guidelines. The treatment charges to be prescribed by the respective SPCB/PCC in consultation with the State Advisory Committee to be constituted under the BMWM Rules by the respective State Government or UT Administration.

9) Treatment equipment

The Common Bio-medical Waste Treatment Facility should treat the bio-medical waste as per BMWM Rules and as per the authorisation granted by the prescribed authority. The CBWTF should have the following treatment facilities:

a) Incineration/Plasma Pyrolysis

Incineration is a controlled combustion process where waste is completely oxidized and harmful microorganisms present in it are destroyed/ denatured under high temperature. The guidelines for "Design & Construction Requirements of Bio-medical Waste Incinerators" by CPCB from time to time shall be followed for selecting/or augmenting the incinerator.

Plasma Pyrolysis is an alternate to incinerator, Plasma Pyrolysis treatment technology can be installed for disposal of bio-medical waste categories as per BMWM Rules wherein destruction of bio-medical waste is similar to incineration can be achieved. In case of plasma pyrolysis, waste is treated at high temperature under controlled condition to form gases like methane, hydrogen and carbon monoxide which are subjected to combustion (oxidation) in secondary chamber. In the plasma pyrolysis process waste is converted into small clinker which can be disposed in secured landfills.

b) Autoclaving/Hydroclaving

- (i) **Autoclaving** is a low-heat thermal process where steam is brought into direct contact with waste in a controlled manner and for sufficient duration to disinfect the wastes as stipulated under the Bio-medical Waste Management Rules. For ease and safety in operation, the system should be horizontal type and exclusively designed for treatment of bio-medical waste. For optimum results, pre-vacuum based system be preferred against the gravity type system. It shall have tamper-proof control panel with efficient display and recording devices for recording critical parameters such as time, temperature, pressure, date and batch number etc. as required under the BMWM Rules.
- (ii) **Hydroclaving** is similar to that of autoclaving except that the waste is subjected to indirect heating by applying steam in the outer jacket. The waste is continuously tumbled in the chamber during the process.
- c) **Microwaving:** In microwaving, microbial inactivation occurs as a result of the thermal effect of electromagnetic radiation spectrum lying between the frequencies 300 and 300,000MHz. Microwave heating is an inter-molecular heating process. The heating occurs inside the waste material in the presence of steam.
- d) **Chemical disinfection:** Though chemical disinfection or alternates as stipulated under the BMWM Rules is also an option for treatment of certain categories of bio-medical waste such as glass waste but looking at the volume of waste to be disinfected at the CBWTF and the pollution load associated with the use of chemical disinfectants, the chemical disinfection for treatment of bio-medical waste as part of a CBWTF may be used sparingly or avoided as far as possible.
- e) **Dry heat sterilization:** This is the additional option for treatment of waste sharps as stipulated under the BMWM Rules. In this method, waste sharps are treated using

dry heat (hot air) at a temperature not less than 185°C, at least for a residence period of 150 minutes in each cycle (with sterilization period of 90 minutes).

- f) *Shredder:*** Shredding is a process by which waste are de-shaped or cut into smaller pieces so as to make the wastes unrecognizable. It helps in prevention of reuse of bio-medical waste and also acts as identifier that the wastes have been disinfected and are safe to dispose off. A shredder to be used for shredding bio-medical waste shall confirm to the following minimum requirements:
- (i) The shredder for bio-medical waste shall be of robust design with minimum maintenance requirement;
 - (ii) The shredder should be properly designed and covered to avoid spillage and dust generation. It should be designed such that it has minimum manual handling;
 - (iii) The hopper and cutting chamber of the shredder should be so designed to accommodate the waste bag full of bio-medical waste;
 - (iv) The shredder blade should be highly resistant and should be able to shred waste sharps, syringes, scalpels, blades, plastics, catheters, intravenous sets/ bottles, blood bags, gloves, bandages etc. It should be able to handle/ shred wet waste, especially after microwave/ autoclave/hydroclave;
 - (v) The shredder blade shall be of non-corrosive and hardened steel;
 - (vi) The shredder should be so designed and mounted so as not to generate dust, high noise & vibration;
 - (vii) If hopper lid or door of collection box is opened, the shredder should stop automatically for safety of operator;
 - (viii)]In case of shock-loading (non-shreddable material in the hopper), there should be a mechanism to automatically stop the shredder to avoid any emergency/accident;
 - (ix) In case of overload or jamming, the shredder should have mechanism of reverse motion of shaft to avoid any emergency/accident;
 - (x) The motor shall be connected to the shredder shaft through a gear mechanism, to ensure low rpm and safety;
 - (xi) The unit shall be suitably designed for operator safety, mechanical as well as electrical;
 - (xii) The shredder should have low rotational speed (maximum 50 rpm). This will ensure better gripping and cutting of the bio-medical waste;
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- (xiii) The discharge height (from discharge point to ground level) shall be sufficient (minimum 3 feet) to accommodate the containers for collection of shredded material. This would avoid spillage of shredded material;
 - (xiv) The minimum capacity of the motor attached with the shredder shall be 3 KW for 50 Kg/hr, 5 KW for 100 kg/hr & 7.5 KW for 200 Kg/hr and shall be three phase induction motor. This will ensure efficient cutting of the bio-medical wastes as prescribed in the Bio-medical Waste Management Rules; and
 - (xv) The shredder also should be fitted with separate 'energy meter' for recording total energy consumed for operation of this equipment.

g) Sharp pit/ Encapsulation: A sharp pit or a facility for sharp encapsulation in a metal container or cement concrete shall be provided for treated sharps (*i.e., treatment by autoclaving or dry heat sterilization followed by shredding or mutilation*). An option may also be worked out for recovery of metal from treated and shredded waste sharps within the CBWTF or iron foundries having consent to operate from the SPCBs/PCCs and located nearby, as per the conditions imposed in authorization granted under BMWM Rules by the SPCB/PCC.

A sharp pit may be of circular or rectangular shape and shall be dug and lined with cement plastered brick masonry or concrete rings. The pit should be covered with a heavy concrete slab with a provision of galvanized steel pipe projecting about 1.5 meters above the slab, with an internal diameter of up to 50 mm or 1.5 times the length of vials, whichever is more. The top opening of the steel pipe shall have a provision of locking after the treated waste sharps are disposed into the sharp pit. When the pit is full, it can be sealed completely, after another pit is prepared. In case of high water table regions (*i.e., where water table is less than 6 metres beneath the bottom of the sharp pit*), a tank with above mentioned arrangements shall be made above the ground.

h) Deep burial: Any SPCB/PCC should not allow the 'deep burial' of bio-medical waste as a part of CBWTF. Any existing CBWTF having disposal of bio-medical waste by deep burial should have the requisite treatment equipment as stipulated under the BMWM Rules, *within six months* from the date of finalization of these guidelines.

i) Non-burn technology: Non-incineration technologies for disposal of bio-medical waste are adopted in some of the developed countries. Non-incineration technology comprises of shredding and disinfection by autoclaving/microwaving or chemical treatment. The treated waste can be disposed along with municipal solid waste in sanitary landfills or through waste to energy plants. Such option can also be adopted in places where the sanitary landfill or waste to energy plant for disposal of municipal

solid waste is available. Such technology is permitted only after prior approval of MoEF & CC and only after obtaining authorization under the BMWM Rules from the respective SPCB/PCC for the purpose of carrying out trial runs for assessment of efficacy of the treatment equipment.

- j) *Vehicle/Containers washing facility:*** Every time a vehicle is unloaded, the vehicle and empty waste containers shall be washed properly and disinfected. Washing can be carried out in an open area but on an impermeable surface and liquid effluent so generated shall be conveyed and treated in an effluent treatment plant. The impermeable area shall be of appropriate size so as to avoid spillage of liquid during washing.
- k) *Effluent Treatment Plant:*** A suitable Effluent Treatment Plant (ETP) shall be installed to ensure that liquid effluent generated during the process of washing containers, vehicles, floors etc. is treated and reused after treatment. Proper treatment of waste water shall be ensured in case of zero discharge by recirculation of treated waste water for scrubbing. *ETP may have treatment unit operations comprising collection tank, O & G trap, chemical dosing cum mixing (Flash and slow), coagulation chamber, primary settling tank (s), biological treatment process, secondary settling tank, pressure filter and activated carbon filter, pH Correction tank (wherever recirculation of treated water is practiced) so as to comply with the liquid discharge standards stipulated under the Bio-medical Waste Management Rules, 2016.* ETP may also have the following provisions:
- (i) separate 'energy meter' so as to know total consumption of electricity for operation of the machinery attached with the ETP.
 - (ii) pH meter so as to know pH level of treated water as well as pH level of treated water used for recirculated or recycling in APCD attached with the incinerator or any utility within the CBWTF.
 - (iii) A 'magnetic flow meter' should also be fitted at all the water supply extraction points of the CBWTF as well as the outlet to know the total wastewater treated for further end use or discharge in compliance to the BMWM Rules.
 - (iv) Provision of 'press filter' to reduce the moisture content of the ETP Sludge or it may be dried in 'sludge drying bed'. After removal of moisture content or drying, same need to be disposed off in an environmentally sound manner depending upon the hazardous constituents present in it as per Hazardous and Other Waste (Management and Transboundary Movement) Rules, 2016.
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In case, ETP sludge contains metal contents within the prescribed limits as per Hazardous & Other Waste (Management & Transboundary Movement) Rules, 2016, such ETP sludge shall be given to CBWTF for incineration or to hazardous waste treatment, storage and disposal facility (TSDF) for disposal in secured landfill.

Note:

- a) If any CBWTF desires to adopt any other technology other than referred under Schedule –I of the BMWM Rules, may adopt new technology only with the prior approval from MoEF & CC and is also required to obtain authorization under the BMWM Rules from the respective SPCB/PCC for carrying out trial run for assessment of efficacy of the new technology.
- b) All the treatment equipment should be operated and complied with the norms as stipulated under Schedule II of the Bio-medical Waste Management Rules, 2016 published by MoEF & CC vide GSR 343 (E) dated 28th March, 2016.
- c) Incinerator / Plasma Pyrolysis/ Autoclaving/Microwaving/ Hydroclaving/ Shredder/ Dry Heat Sterilization/ ETP should be fitted with separate 'energy meter' for recording total energy consumed for operation of these equipment.
- d) In the event of temporary shutdown (not more than a week) due to any operational problems in the treatment equipment (such as restoration of refractory lining or maintenance or repairs in APCD), to ensure bio-medical waste collected from the member health care facilities is treated within the time limit as stipulated under the BMWM Rules, each all the CBWTF operators should also be provided with stand by treatment equipment especially incinerator/plasma pyrolysis/autoclave (or) alternately MoU made with the nearby CBWTF (located within the State/UT) shall be submitted to the respective SPCB/PCC, by all the existing CBWTF operators (whereas the upcoming facilities have to make such arrangement prior to commencement of the facility) so as to include such condition while granting authorisation under the BMWM Rules, 2016 to the concerned CBWTF operators (vice-versa).

(10) Infrastructure set up

The CBWTF shall have enough space within it to install required treatment equipment, untreated and treated waste storage area, vehicle-parking, vehicle and containers washing area, Effluent Treatment Plant (ETP), administration room or staff room etc. The required area for CBWTF would depend upon the projected amount of bio-medical waste to be handled by it. A CBWTF shall have the following infrastructure:

a) Treatment Equipment Room

A separate housing may be provided for each treatment equipment at the CBWTF such as incinerator room, autoclave room, microwave room etc., as applicable. Each room shall have well-designed roof and walls. Such room shall be well ventilated and easy to wash. The floor and interior finishing of the room shall be such that chances of sticking/harboring of microorganisms are minimized. This can be attained by

providing smooth & fine floor and wall surfaces (to a height of 2 meter from floor) preferably of tiles. The number of joints in such surfaces shall be minimal. The equipment room shall also have a separate cabin, to supervise the operation of the equipment and to record the waste handling and equipment operational data attached to each equipment room. There shall be two waste storage rooms, one for storage of untreated waste and another for treated waste and may be located at a distance from each other. The storage room shall have provisions similar to that of equipment room being well-ventilated with easy to wash floors & walls, smooth and fine surfaces etc. All the treatment equipment rooms and waste storage rooms should be provided with 'fly catcher/killing device'. The room shall be washed and cleaned with a suitable disinfectant every day.

b) Main waste storage space

Separate space shall be provided near the entry point of the CBWTF to unload and store all biomedical wastes that have been transported to the CBWTF by its own transportation vehicle. The size of the room shall be adequate to store all wastes transported to the CBWTF. The front portion of the room shall be utilized for unloading the wastes from the vehicle and back or side portion shall be utilized for shifting the wastes to the respective treatment equipment. In the front portion of the room where transportation vehicle is parked for unloading, the floor shall be made impermeable so that any liquid spillage during unloading does not percolates into the ground. The liquid generated during handling of wastes and washing, shall be diverted to the inlet of effluent treatment plant (ETP). In the main storage room, wastes shall be stacked with clear distinction as per the color coding of the containers by providing partitions. From here, the colored containers may be sent to the respective treatment equipment by using suitable closed type of conveyance (trolley etc.,). The main storage room too shall have provisions similar to that of equipment room such as roofing, well ventilated, easy to wash floors & walls, smooth and fine surfaces etc.

Apart from the above, a CBWTF should have separate storage provision for storage of mercury bearing waste collected from the member health care facilities as per the procedure given in CPCB guidelines. Mercury storage provision should be provided as per the guidelines issued by CPCB (refer www.cpcb.nic.in). The capacity of the mercury storage provision should be maximum of 90 days and by which the collected mercury bearing waste shall have to be disposed of through a TSDF located nearby following the manifest as per Hazardous and Other Waste (Management and Transboundary Movement) Rules, 2016. The charges for collection and disposal of

mercury bearing waste shall be collected by the CBWTF from the respective member HCF.

c) Treated waste storage room

Separate space should be provided to store the wastes treated in different treatment units. The wastes shall be stored in separate group as per the disposal options. Other provisions in the room shall be similar to the main storage room. Waste such as incineration ash/vitrified ash generated in the process of incineration/plasma pyrolysis respectively shall be stored safely in a separate area under the shed so as to avoid entry of rain water during the monsoon and for easy collection. In case, incineration ash/ vitrified ash is found to be hazardous waste in nature same should be disposed of through any authorized TSDF operator located nearby following the manifest as per Hazardous and Other Waste (Management and Transboundary Movement) Rules, 2016. In case of a State/UT where TSDF is not available, all the CBWTF operators have to store incineration ash safely as per these guidelines.

d) Administrative Room

This room shall be utilized for general administration, record keeping, billing etc.

e) Generator set

CBWTF shall have a generator set of adequate capacity as standby arrangement for power, with sufficient capacity to run the treatment equipment during the failure of power supply. The generator set shall comply with the necessary requirement as per DG Set norms notified under the Environment (Protection) Act, 1986.

f) Continuous emission monitoring system (CEMS)

Monitoring provision for continuous monitoring of the incinerator/plasma pyrolysis stack emission shall be installed by the CBWTF operators for the parameters as stipulated by the respective SPCB/PCC as per the authorisation granted under the BMW Rules, 2016. Other-wise, at present, all the existing CBWTF operators are required to carry out stack emission monitored using continuous emission monitoring system for the flue gas parameters such as CO₂, O₂, CO as well as primary & secondary chamber temperatures, and records maintained. The continuous emission monitoring system for stack emission should be installed as per the guidelines issued by SPCB/PCC/CPCB. Also, the real time continuous stack emission

monitoring data is also required to be transmitted to the servers of the respective SPCB/PCC as well as CPCB, by all the existing CBWTF operators

g) Vehicle Parking

Provision for parking shall be made within the confines of the site for parking of required number of vehicles, loading and unloading of the vehicles meant for transporting waste to and from the facility, etc.. In case of a CBWTF with space constraints, multi-storey parking or a separate provision may be allowed only for parking of vehicles.

h) Display and sign board

An identification board (Display) of durable material and finish shall be displayed at the entrance to the facility. This shall clearly display the name of the facility, owner name, address and telephone number of the operator and the prescribed authority, no. of hours of operation & operational hours, telephone numbers of the personnel to be contacted in the event of an emergency, validity period of authorization as well as total daily waste treated and disposed. Also, sign boards should be provided at all the salient points (untreated waste storage area, treatment equipment, treated waste storage area, ETP, firefighting equipment) within the facility.

i) Washing Room

A washing room shall be provided for eye washing/hand washing/ bathing etc. for the workers.

j) Site Security

High walls, fencing and guarded gates shall be provided at the facility to prevent unauthorized access to the site by humans and livestock.

k) Fire safety

Fire safety equipment such as sand buckets and fire extinguishers should be provided at all the salient points of the CBWTF including at the diesel storage areas, diesel tanks connected with the incinerator etc. Fire alarm also should be provided within the CBWTF to prompt the workers in the event of any fire hazard. Workers should also be trained in First Aid administration.

l) First Aid Box

First Aid Box with necessary provisions need to be provided at all the salient points within the facility.

m) Green Belt

The open area available within the CBWTF shall be developed into green belt.

n) Website: (newly added as per BMWM Rules, 2016)

All the existing CBWTFs shall develop own website by 27.03.2017 whereas the upcoming CBWTF shall develop the website prior to the commencement of the facility. The website should be uploaded with relevant information periodically (on monthly basis) especially as detailed below:

- (i) A copy of the Environmental Clearance obtained;
 - (ii) Copies of the Consents under the Water (Prevention and Control of Pollution) Act, 1974 and Air (Prevention and Control of Pollution) Act, 1981 as well as the Authorisation under the BMWM Rules obtained from the SPCB/PCC;
 - (iii) List of all the member Health Care Facilities with complete address, bedded or non-bedded HCFs, no. of beds, bar code, category-wise average bio-medical waste generation in kg/annum;
 - (iv) Charges levied on the member Health Care Facilities (HCFs) for treatment and disposal of bio-medical waste;
 - (v) Vehicles connected with a provision of GPS as per BMWM Rules and Vehicle-wise route chart for collection, transportation of bio-medical waste from the member HCFs;
 - (vi) Real time continuous online stack emission monitoring data;
 - (vii) Daily bio-medical waste collected, received and treated (Member HCF-wise);
 - (viii) Monthly details of total waste collected from the member HCFs, total waste treated, and treated recyclable plastic waste or glass waste sold to the parties and final mode of disposal of incineration ash;
 - (ix) A copy of the annual report submitted to the respective SPCB/PCC;
 - (x) Monitoring results of the stack emissions, treated wastewater and incineration ash, as per the frequency stipulated under the BMWM Rules;
 - (xi) List of HCFs (located within the coverage area) with complete address which have not taken membership of the CBWTF for disposal of Bio-medical waste;
 - (xii) Contact person, contact telephone number and e-mail addresses of the facility; and.
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- (xiii) Provision to have access to the SPCB/PCC/CPCB/MoEF & CC/MoH & FW especially on GPS, online monitoring system and the data.

Besides the provisions suggested in the earlier paras, following important provisions should also be made in a CBWTF:

- (i) A telephone shall be provided and maintained at the facility.
- (ii) A First Aid Box shall be provided and maintained at the CBWTF.
- (iii) Proper lighting shall be provided at the facility.
- (iv) Proper care shall be taken to keep the facility and surroundings free from odors.
- (v) Measures shall be implemented to control pests and insects at the site.
- (vi) Measures shall be implemented to control the escape of litter from the site.
- (vii) Necessary provision shall be made to prevent and control noise generated, if any, due to the activities at the site.
- (viii) Necessary protective gear for the waste handlers shall be provided.
- (ix) Immunization to all the workers of CBWTF against all the diseases including especially Tetanus and Hepatitis -B as stipulated under the BMWM Rules.
- (x) Workers should have provisions such as washing, toilet, and suitable place for eating.
- (xi) Workers should also be provided with N-95 mask besides other PPEs such as hand gloves, gumboots, goggles etc.

Every CBWTF operator shall submit a work-plan to the Prescribed Authority. The work-plan should include the details of facilities at the CBWTF, collection, transportation & storage of the bio-medical wastes, operational details etc.

11) Record keeping

Maintenance of records for all operations carried out at the CBWTF is very important to monitor overall operation of the CBWTF. It also helps in submission of the required information to be submitted to the 'Prescribed Authority' by 30th June of every year as per the format prescribed under the BMWM Rules or provided by the SPCB/PCC. A well-maintained record of all the activities at the CBWTF also enables the facility operator to produce all information of the activities on demand of the concerned prescribed authority. The record should include all information relating to each activity at the CBWTF site as per BMWM Rules which include accidents occurred (spills, injury, fire accident) and the measures taken and also, however, minimum requirement is outlined below:

a) Records of waste movements

Daily records shall be maintained for the waste accepted and treated waste removed from the site. This record shall include the following minimum details:

- (i) **Waste accepted:** -Records on day-to-day basis (as per the format given at **Annexure-II**) shall be maintained with respect to the waste collection date, name of the healthcare unit with bar code, waste category as per BMWM Rules, category-wise quantity of waste accepted, vehicle registration number used for collection of bio-medical waste from member health care facilities, time at which waste collected from member HCFs, name of the vehicle driver and his signature and waste receiving date & time (at CBWTF site). Similar information to be acknowledged to the member health care facility by the CBWTF operator on daily basis.
- (ii) **Treated waste to be disposed:-** Date, treated waste type, Quantity, vehicle number, disposal as stipulated under BMWM Rules.

b) Logbook for the treatment equipment

A logbook shall be maintained for each treatment equipment installed at the site and shall include the following:

- (i) The weight of each batch.
- (ii) The categories of waste as per the Rules.
- (iii) The time, date and duration of each treatment cycle and total hours of operations.
- (iv) The complete details of all operational parameters during each cycle.

Log book to be maintained for operating the incinerator/plasma pyrolysis as well as the autoclave as per the formats given at **Annexure -III**.

c) Monitoring and reporting of operations in the CBWTF:

The monitoring of the key operating parameters of treatment equipment provides several benefits. First, monitoring provides the operator with information needed to make decisions on necessary combustion control adjustments. Second, properly maintained monitoring records can provide useful information for identifying operating trends and potential maintenance problems. Following are the suggested parameters for monitoring of the treatment equipment

(i) **Monitoring of operating parameters of the incinerator/plasma pyrolysis:** Following operating parameters can be monitored in case of incinerator/plasma pyrolysis:

- Waste charge rate.
- Combustion gas temperature in primary and secondary chamber as well as the temperature of the stack exit gas (flue gas).
- Condition of the draft (negative draft in primary chamber).
- Combustion gas oxygen level in primary and secondary chamber as well as stack exit gas.
- Air flow rate through the incinerator/plasma pyrolysis.
- Carbon-Di-Oxide (CO₂), Oxygen (O₂) and Carbon Monoxide (CO) level in the flue gas.
- Quantity of auxiliary fuel usage as well as the power consumption (in every batch).
- Pressure drop in the primary chamber and APCD attached with the incinerator/plasma pyrolysis and
- Bottom ash or slag quality (for Total Organic Carbon (TOC) as well as loss on ignition and the hazardous constituents (at least once in a quarter).

(ii) **Monitoring of operating parameters of the Autoclave:** Following operating parameters can be monitored during the sterilization using autoclave:

- Time at which sterilization started and time at which sterilization completed.
- Temperature conditions maintained throughout the sterilization
- Conditions of pressure maintained throughout the sterilization
- Duration of sterilization
- Validation test results

Records concerning the above parameters need to be maintained and checked periodically for taking remedial measures during the operation of the incinerator or plasma pyrolysis or autoclave. In case of other treatment processes, the operational conditions as well as the efficacy tests to be complied with as per the standards prescribed under the BMWM Rules.

(iii) **Frequency of monitoring:**

The CBWTF operator shall carry out following tests through a NABL approved laboratory or a laboratory approved under the Environment (Protection) Act, 1986, as

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per the frequency stipulated under the BMWM Rules or as prescribed by the SPCB/PCC and record of such analysis results shall be maintained and submitted to the prescribed authority (SPCB/PCC), as suggested below:

- **Liquid effluent:** Parameters such as pH, Suspended Solids, Oil & Grease, BOD, COD, Bio-assay for liquid effluent being discharged from the CBWTF be monitored as per the Consent conditions or once in a quarter and such records maintained and submitted to SPCB/PCC.

- **Stack emission monitoring:**

In case of the BMW incinerators which came after 28.03.2016, the Stack Emission shall be monitored (under optimum capacity) for parameters such as Particulate Matter, HCl, NO_x, Hg & compounds and combustion efficiency *once in three months* as required under schedule II of the Bio-medical Waste Management Rules 2016 (All monitored values shall be corrected to 11% Oxygen on dry basis). In case of dioxins and furans, monitoring should be done *once in a year* (monitored values shall be corrected to 11% Oxygen on dry basis). In case of the incinerators (existing prior to the notification of BMWM Rules, 2016), new incinerators standards are required to be complied within two years i.e., by 27.03.2018.

- **Validation test of autoclave/microwave/chemical treatment/dry heat sterilization:**

Suggested validation test for treatment of bio-medical waste by autoclave/microwave/chemical treatment/Dry heat sterilization is given in **Table 1**.

Table 1: Suggested validation test for treatment of bio-medical waste by autoclave/microwave/chemical treatment/Dry heat sterilization

S. No	Type of equipment used for treatment of bio-medical waste	Type of Validation Test	Frequency
(i)	Autoclave	(i) biological indicator strips or vials <i>Geobacillus stearothermophilus</i> spores with at least 1×10^6 spores),	once in three months
		(ii) chemical indicator strip or tape	each batch of waste treated
(ii)	Microwave	<i>Bacillus atrophaeus</i> spores using vials or spore strips with at least 1×10^4 spores per detachable strip	Recommended: once in three months
(iii)	Chemical treatment followed by shredding	<i>Bacillus Subtilis</i> (ATCC 19659)- 4 Log ₁₀ reduction or greater	Once in a week
(iv)	Dry heat sterilisation	consistently kill the biological indicator <i>Geobacillus Stearothermophilus</i> or <i>Bacillus Atropheaus</i> spores using vials with at least 6 log ₁₀ spores per ml.	Once in three months
		A chemical indicator strip or tape	Once in a week

d) Site Records:

Site records shall include the following:

- (i) All the approvals obtained from other concerned departments other than the prescribed authority;
- (ii) Details of construction or engineering works;
- (iii) Maintenance schedule, breakdowns/trouble shootings and remedial actions;
- (iv) Emergencies;
- (v) Incidents of unacceptable waste received and the action taken; and
- (vi) Details of site inspections by the officials of the regulatory authorities, purpose of visits with date and necessary actions initiated on the observations.

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Daily, monthly and annual summary records of all the above shall be maintained and made available at the site for inspection and same submitted whenever required by an authorized official of the concerned regulatory authorities.

12) Collection and transportation of bio-medical waste

The collection and transportation of bio-medical waste shall be carried out in a manner so as to prevent any possible hazard to human health and environment. Collection and transportation are the two operations where the chances of segregated bio-medical waste coming in contact with the public, rag pickers, animals/birds, etc. are high. Therefore, all care shall be taken to ensure that the segregated bio-medical waste handed over by the healthcare units reach CBWTF without any damage, spillage or unauthorized access by public, animals etc. A responsible person from the CBWTF operator shall always accompany the vehicle to supervise the collection and transportation of bio-medical waste. Also, the private transport vehicles should not be authorised by the SPCBs/PCCs only for transportation of the Bio-medical Waste. The CBWTF operator should be made responsible for collection and transportation of bio-medical waste.

a) Collection of bio-medical waste:

Generator of the bio-medical waste is responsible for providing segregated waste in accordance with the provisions of the Bio-medical Waste Management Rules, 2016, to the CBWTF operator. Dedicated temporary storage at healthcare unit shall be designated. The coloured bags handed over by the healthcare units shall be collected in similar coloured containers with proper cover. Each bag shall be labeled as per Schedule IV of the Bio-medical Waste Management Rules as well as with bar coding system (to be complied by the occupier or operator of a CBWTF as per BMWM Rules) so that at any time, the healthcare units can be traced back that are not segregating the bio-medical wastes as per BMWM Rules. The coloured containers should be strong enough to withstand any possible damage that may occur during loading, transportation or unloading of such containers. These containers shall also be labeled as per Schedule IV of the Rules. Sharps shall be collected in puncture resistant container. The person responsible for collection of bio-medical wastes shall also carry a register with him to maintain the records such as name of the healthcare unit, the type and quantity of waste received, time at which waste collected from the member HCF, signature of the authorised person from the healthcare unit etc. During transportation, the containers should be covered in order to prevent exposure of public to odours and contamination.

(b) Transportation of the collected bio-medical waste to the CBWTF:

All the vehicles used by the CBWTF operator shall not be sub-letted or contract vehicles should not be used by the CBWTF operator. All the vehicles owned by the CBWTF operator and intended only for collection of bio-medical waste from the member health care facilities should be registered under the Motor Vehicle Act with the respective RTO/Transport Department and such vehicle numbers should also be registered with the respective SPCB/PCC for the purpose of collection of bio-medical waste from the member health care facilities. The bio-medical waste collected in designated coloured containers shall be transported to the CBWTF in a fully covered vehicle. Such vehicle shall be dedicated for transportation of bio-medical waste only. Depending upon the volume of the wastes to be transported, the vehicle may be a two or three-wheeler, light motor vehicle or heavy duty vehicle. In either case, the vehicle must possess the following:

- (i) Transportation vehicle shall be fitted with GPS to track the movement of the vehicle.
 - (ii) Separate cabins shall be provided for driver/staff as well as for placing the designated colour coded bio-medical waste containers.
 - (iii) Two wheeler registered under the Motor Vehicle Act shall be permitted for collection of bio-medical waste only from the clinics or dispensaries located in places where the lanes are narrow and not easily accessible to four wheeler vehicles. Such two wheeler vehicle (s) should have a provision of a suitable fixed waste collection box marked with bio-hazard symbol, contact details, proper lid, emergency spill collection procedure, first aid box and manifest record in accordance with the BMWWM Rules
 - (iv) The base of the waste cabin shall be leak proof to avoid pilferage of liquid during transportation.
 - (v) The waste cabin may be designed for storing waste containers in tiers and also should be provided with a lighting provision.
 - (vi) The waste cabin shall be so designed that it is easy to wash and disinfect.
 - (vii) The inner surface of the waste cabin shall be made of smooth surface to minimize water retention.
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- (viii) The waste cabin shall have provisions for sufficient openings in the rear and/or sides so that waste containers can be easily loaded and unloaded.
 - (ix) The vehicle shall be labeled with the bio-hazard symbol (as per Schedule IV of the BMW Rules) and should display the name, address and contact telephone and mobile number of the CBWTF.
 - (x) The vehicle driver should carry always valid registration of the vehicle obtained from the concerned transport authority and also carry valid 'pollution under control certificate' issued by the authorized certificate issuing agency.

Depending upon the area to be covered under the CBWTF, the route of transportation shall be worked out. The transportation routes of the vehicle shall be designed for optimum travel distance and to cover all member healthcare units of the CBWTF. The CBWTF operator should ensure online and real time tracking & monitoring provisions (GPS provision) should be given access with passwords to the SPCB/PCC and CPCB to cross check the movement of the transportation vehicles on any time by the SPCB/PCC/CPCB. As far as possible, the transportation shall be carried out during non-peak traffic hours. If the area to be covered is very large, a satellite station may be established to store the bio-medical waste collected from the adjoining areas. The wastes so stored at satellite station may then be transported to the CBWTF in a big vehicle. It shall be ensured that the total time taken from generation of bio-medical waste to its treatment, which also includes collection and transportation time, shall not exceed 48 hours.

13) Disposal option of solid waste generated from the CBWTF

Treated plastic waste, incineration ash, treated waste sharps and glass waste, Oil & Grease waste and ETP sludge are generally generated from the CBWTF from the treatment systems such as autoclaving/microwaving, incineration, chemical disinfection and effluent treatment plant respectively. The treated bio-medical waste shall be disposed as per the options suggested in the **Table 2** given below:

Table 2: Suggested Disposal option of solid waste generated from the CBWTF

Sl. No.	Treated Waste Category	Suggested Treatment and Disposal Options
1.	Plastic wastes after disinfection and shredding	Plastic waste should not be sent to landfill sites. Treated plastic waste to be (i) sent to registered or authorized recyclers (or) (ii) for energy recovery (or) (iii) for diesel or fuel oil recovery (or) (iv) for road making, whichever is possible.
2.	Disinfected Sharps (including needles and syringes) (i.e., Treatment by Autoclaving or Dry Heat Sterilization followed by shredding or mutilation combination of shredding cum autoclaving)	Encapsulation in metal container or cements concrete; (or) sent for final disposal to iron foundries (having consent to operate from the SPCBs/PCCs (or) sanitary landfill or designated concrete waste sharp pit.
3.	Incineration ash	Incineration ash (ash from incineration of any bio-medical waste) shall be disposed through hazardous waste treatment, storage and disposal facility (TSDF), if toxic or hazardous constituents are present beyond the prescribed limits as given in Schedule -II of the Hazardous and Other Waste Management & Transboundary Movement Rules or as revised from time to time.
4.	Other treated solid wastes like Glass waste	Disinfection (by soaking the washed glass waste after cleaning with detergent and Sodium Hypochlorite treatment) or through autoclaving or microwaving or hydroplaning and then sent for recycling.
5.	Oil & Grease	By Incineration
6.	ETP Sludge	After drying in sludge drying beds or removal of moisture content using 'Filter Press' and such ETP sludge shall be given to CBWTF for incineration or to the hazardous waste treatment, storage and disposal facility (HWTSDf) for disposal in Secured Landfill
7.	Hazardous Waste	Disposal through a TSDF located nearby following the manifest as per the Hazardous and Other Waste (Management & Transboundary Movement) Rules, 2016

14) Cost to be charged by the CBWTF Operator for the Health Care Facilities

Cost to be charged from the healthcare facilities plays an important role in financial viability and sustainable operation of a CBWTF project, for providing the best treatment services to the Health Care Units and for ensuring compliance to the BMW Rules. The cost shall be so worked out that neither it becomes a monopoly of the CBWTF operator nor the interest of the CBWTF operator is overlooked. It is recommended that cost to be charged from the healthcare units, depending on the size, no, of beds and the distance from the location of the CBWTF and same shall be worked out in consultation with the concerned SPCB/PCC and the local Medical Association, keeping in view the following options:

- (a) In case of non-bedded health care units, fixed charges depending on the average quantity of waste generation per day, in case of the nursing homes/clinics/sample collection Centres /Dental Centres, dispensary, pathological laboratory, blood banks, and other non-bedded hospitals irrespective of their system of medicine including ayush hospitals.
- (b) In case of bedded hospitals, fixed charges per bed per day basis and based on the no. of beds for which consents under the Water Act, 1974/Air Act, 1981 and authorization granted under the BMW Rules, by the prescribed authority

Note:

- (i) Rates are required to be revised once in a year based on the Wholesale Price Index (WPI Index) or Consumer Price Index (CPI Index) (considering the prevailing market price especially in respect of the labour expenses, diesel prices, electricity, operating cost etc.,), by the State Advisory Committee in consultation with the concerned SPCB/PCC, local Medical Association and the representatives of the CBWTF Association
- (ii) The Health Care Facilities are required to ensure timely payments to the CBWTFs for ensuring timely treatment services in compliance to the BMW Rules as well as agreement made with the concerned CBWTF Operator.

15) Check list for development of CBWTF

The criteria for development of CBWTF have been discussed in detail in the

Previous sections. However, to have at a glance check in developing CBWTF, checklist is reproduced for convenience and is annexed (**Annexure-IV**).

16) Periodic inspection/monitoring or performance evaluation of the CBWTF

To have uniformity in performance evaluation of the CBWTF throughout the country, a check list for performance evaluation of the CBWTF for carrying out inspection/monitoring/compliance verification has been prepared and is annexed (**Annexure -V**). All the prescribed authority (SPCB/PCC) shall inspect the CBWTF at least once in six months located in the respective State/UT and a copy of the inspection reports shall be submitted to CPCB and MoEF & CC along with a copy of the action taken for ensuring compliance to the BMWWM Rules and CPCB guidelines issued from time to time and also such information is required to be uploaded in SPCB/PCC website. CPCB shall carryout random inspection of the CBWTFs once in a quarter and any violations observed further actions shall be initiated by CPCB if required under the Environment (Protection) Act, 1986.

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Annexure-I

Coverage area-wise gap analysis for assessing additional BMW treatment capacity requirement

S. No	Coverage area (pl. indicate areas covered by a CBWTF in the State/UT)	No. of HCFs		No. of Beds covered	Total estimated BMW generation in Kg/day	Total existing treatment capacity in Kg					Total BMW Treated and Disposed in Kg/day	Gap between total BMW Generation and the Existing BMW Treatment Capacity in Kg	Remarks (Whether additional Treatment Capacity is required or not)	
		Bedded	Non-bedded			Incineration	Autoclaving/ Hydroclaving /microwaving	Chemical disinfection	Deep burial	Any other mode of disposal			Yes	No
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)

Note: Above gap analysis coverage area-wise is required to be prepared once in five years and should be shown or depicted in a Map of State/UT.

Annexure- II

Format for maintaining the records by the CBWTF Operator alongwith the transportation Vehicle used for collection of bio-medical waste from the member HCFs

Name of the CBWTF :
 Address of the CBWTF with contact details :
 Vehicle Registration Number (certificate to be carried by the vehicle driver) :
 Route covered (indicate places) by the vehicle :

Date	Vehicle number and the Time of arrival of the vehicle	Vehicle Speedo meter mileage readings in KM		Name of the HCF with address and the bar code number from whom waste collected	Category-wise quantity of bio-medical waste received in kg					Total BMW collected by the CBWTF		Name of the Vehicle driver with	Signatures	
		Initial	Final		Yellow	Red	Blue	Out dated medicines	White-Waste Sharps	Total No. of Bags	Total waste		Vehicle Driver	Representative of the HCF
		(3)	(4)		(6)	(7)	(8)	(9)	(10)					
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)		(12)	(13)	(14)

Note: Above format is required to be maintained in duplicate both by the CBWTF Operator and the member HCF

Annexure – IV**Check List for Development of a Common Bio-medical Waste Treatment and Disposal Facility & For issuing 'Consent to Establishment under Water & Air Acts**

-
1. Name of the Proponent :
 2. Proposed location of the CBWTF :
 3. No. of HCFs in the locality :
 4. No. beds :
 5. Total Bio-medical Waste Generation in kg/day :
 - (i) Incinerable in kg/day :
 - (ii) Autoclavable in kg/day :
 - (iii) Glass waste in kg/day :
 - (iv) Waste sharps in kg/day :

 6. **Proposed location of the CBWTDF:** located away from
 - a) Residential area : Yes No
 - b) Sensitive area : Yes No
 - c) Industrial area : Yes No
 - d) Is it as a part of TSDF : Yes No
 - e) Is the facility proposed in Hilly areas : Yes No
 - d) Buffer distance of 500 m available : Yes No

 7. **Proposed land area for CBWTF:**
 - a) Area about 1 acre : Yes No
 - b) Area less than 1 Acre : Yes No
 - c) Area more than 1 Acre : Yes No

 8. **Proposed coverage area of the CBWTF:**
 - a) Any facility located upto a radius of 75 KM from the proposed locality : Yes No
 - b) No. of beds covered by the existing facility/proposed facility:
 - (i) more than 10, 000 beds : Yes No
 - (ii) less than 10,000 beds : Yes No
 - c) Is there any CBWTF within the radius of 75 KM : Yes No
 - d) BMW Waste generation in a coverage area under consideration: Kg/day
-

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- e) Existing CBWTF treatment Capacity :
- (a) Incineration/plasma pyrolysis :..... Kg/day
- (b) Autoclave/hydroclave :Kg/day
- f) Is locality requires any additional capacity (within a radius of 75 KMs)?.
- : Yes No
- (i) If so, indicate reason:.....

9. Requirement of Treatment Facility: Following treatment facilities shall be provided in a CBWTF:

- a) Incineration : Yes No
- b) Autoclave (Pre-vacuum horizontal feeding) / Hydroclave / Microwave. : Yes No
- c) Shredder : Yes No
- d) Sharp pit (with drawing details) : Yes No
- e) Provision for floor washing/vehicle washing: Yes No
- f) Effluent Treatment Plant : Yes No
- g) Secured land fill/Disposal of ash in TSDF : Yes No
- h) Other provisions as per CPCB guidelines : Yes No

10. Segregation

- (i). Segregation shall be as per the Bio-medical Waste Management Rules, 2016 as amended as well as compatible with treatment facilities at CBWTF
- (ii). Occupier/Generator is responsible for providing segregated waste to the operator.

11. Collection

- (i) Respective coloured bags provided with bar code should be kept in similar coloured container i.e. coloured bags shall not be directly kept in vehicle.
- (ii) Sharps shall be collected in puncture resistant, leak proof, rigid containers.
- (iii) Temporary storage at healthcare unit shall be designated.

12. Transport Vehicle

- (I) Dedicated vehicles for collection of Bio-medical waste : Yes No
- (II) Separate cabins shall be provided for driver/staff and the bio-medical waste containers : Yes No

-
- (III) The base of the waste cabin shall be leak proof to avoid pilferage of liquid during transportation : Yes No
 - (I) The waste cabin may be designed for storing waste containers in tiers : Yes No
 - (V) The waste cabin shall be so designed that it is easy to wash and disinfect. : Yes No
 - (VI) The inner surface of the waste cabin shall be made of smooth surface to minimize water retention : Yes No
 - (VII) The waste cabin shall have provisions of sufficient openings in the rear and/or sides so that waste containers can be easily loaded and unloaded : Yes No
 - (VIII) The vehicle shall be labeled with the bio-hazard symbol (as per Schedule IV of BMWM Rules) and should display the name, address and telephone number of the CBWTF : Yes No
 - (IX) Other provision as per CPCB guidelines : Yes No

13. Storage

- (I) Sufficient ventilated storage space for untreated and treated bio-medical waste shall be provided. : Yes No
- (II) The flooring and walls (to a height of 2M from floor) shall be finished with smooth and fine material. There shall be minimum number of joints. : Yes No

14. Record Keeping

- (I) Documents such as collection advice taken from health care units for each category of waste, records of waste movements, logbook for the equipment and site records shall be maintained. : Yes No
- (II) All the record (five year) shall be available at the CBWTF site for inspection. : Yes No

15. Proposed Treated Waste Disposal method:

- (i). Incineration ash - Secured landfill/near by TSDF : Yes No
 - (ii). Plastic waste after disinfection and shredding –Registered Recycling Unit : Yes No
 - (iii). Sharps, after disinfection (if encapsulated) - Municipal landfill : Yes No
 - (iv). Treated wastewater –Discharge into sewer/drain or recycling in APCD
-

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- (v). Oil & grease –By incineration: : Yes No
- (VI). Any other mode of disposal of recyclable waste: : Yes No
- (If so, pl. indicate)

16. Estimated energy consumption and fuel consumption per month :

- (i) Estimated energy consumption per month
- (a) General lighting in the facility :
- (b) Incinerator :
- (c) Autoclave/microwave :
- (d) Shredder :
- (e) ETP :
- (f) Any other :
- (ii) Estimated fuel consumption:
- (a) Diesel consumption :..... in KI per month
- (b) No. of hours of operation of DG Set :
- (c) No. of hours of incineration :

17. Whether the proponent obtained necessary approvals from the concerned departments as required : Yes No

(i) If yes, attach details

18. Whether the proponent obtained EC as per EIA 2006 and the amendments made thereof : Yes No

(i) If yes, attach a copy of the EC obtained from the concerned

19. Whether the proposal recommended for issuing consent to establish : Yes No

(Signature of the official verified with date)

Annexure – V

**Check List for Performance Evaluation of the
Common Bio-medical Waste Treatment and Disposal Facility (CBWTF)**

S.No.	Details	Particulars
01.	Name of CBWTF with contact details :	
02.	Date of visit :	
03.	Location details of the CBWTF :	a) Near to Residential area: :Yes <input type="checkbox"/> No <input type="checkbox"/> b) In/near Sensitive area: Yes <input type="checkbox"/> No <input type="checkbox"/> c) In Industrial area : Yes <input type="checkbox"/> No <input type="checkbox"/> d) Is there a buffer zone of 500 m: Yes <input type="checkbox"/> No <input type="checkbox"/> Indicate exact distance: _____ in KM e) Is it as a part of TSDF: Yes <input type="checkbox"/> No <input type="checkbox"/> If so, distance of TSDF from the nearest CBWTF:KM.. f) Is the facility proposed in Metropolitan city: Yes <input type="checkbox"/> No <input type="checkbox"/> (i)Name of the City: (ii)Population of the City (as per latest census): g) Is the facility proposed in Hilly area :Yes <input type="checkbox"/> No <input type="checkbox"/> (i)Name of the Town/City:
04	Month / year of establishment and the Consents status :	Establishment Month/Year :
05.	CBWTF set up by :	
06.	CBWTF operated by :	
07.	Total number of healthcare facilities and beds covered (as on date of visit) :	No. of HCFs : No. of Beds : No. of HCFs and beds upto 75 KM radius:
08.	Total BMW Treatment Capacity of CBWTF (in kg / day) :	Incineration : Autoclave : Any other treatment and disposal:

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S.No.	Details	Particulars
09.	Consents and Authorization details :	
9.1	Consent under Water (Prevention and Control of Pollution) Act, 1974 :	<input type="checkbox"/> Applied for <input type="checkbox"/> Not Applied for <input type="checkbox"/> Possess Valid Consent <input type="checkbox"/> Not renewed <input type="checkbox"/> No consent If obtained: Consent is valid upto and issued bySPCB/PCC vide letter dated
9.2	Consent under Air (Prevention and Control of Pollution) Act, 1981 :	<input type="checkbox"/> Applied for <input type="checkbox"/> Not Applied for <input type="checkbox"/> Possess Valid Consent <input type="checkbox"/> Not renewed <input type="checkbox"/> No consent If obtained: Consent is valid upto and issued bySPCB/PCC vide letter dated
9.3	Environmental Clearance (EC)	<input type="checkbox"/> Applied for <input type="checkbox"/> Not applied <input type="checkbox"/> Obtained <input type="checkbox"/> Not obtained If obtained: EC issued by SEIAA or MoEF& CC vide letter dated
9.4	Authorization under BMW Rules, 1998 :	<input type="checkbox"/> Applied for <input type="checkbox"/> Not Applied for <input type="checkbox"/> Possess Valid Authorisation <input type="checkbox"/> Not renewed <input type="checkbox"/> No Authorisation If obtained: Authorisation is valid upto and issued bySPCB/PCC vide letter dated
10.	Investment in setting up the CBWTF :	
11.	Area of plot size for CBWTF (Sq. ft.) :	
12	Annual Report submission for the year	Submitted before due date : :Yes <input type="checkbox"/> No <input type="checkbox"/> If yes, provide details of waste collected, received and treated & disposed of:
12.	Coverage area of CBWTF (radius in KM covered)	Coverage area upto 75 km radius: Yes <input type="checkbox"/> No <input type="checkbox"/>
13.	Name of Districts/Cities / places being covered	(Pl. indicate Districts or places covered:.....) W.r.to the CBWTF (i) Farthest HCF located at :KM (ii) Nearest HCF located at :KM.

S.No.	Details		Particulars
14.	Daily operation schedule (timings)	:	(i) Collection: ...AM to PM. (ii) Incineration:....AM toPM (iii) Whether waste from member HCFs collected in holidays: <input type="checkbox"/> Yes <input type="checkbox"/> No
15.	Cost charged to the healthcare facilities	:	(i) Charges in Rs..... (ii) Is the cost to be levied suggested by:Organisation
16.	Total quantity of bio-medical waste treated:		kg/day (avg.)
16.1	Incinerable	: %
16.2	Autoclaving	:%
16.3	Others (please specify waste type-wise)	:%
17.	Staff involvement in CBWTF operation (number of persons):		
17.1	Managerial Administration /	:	
17.2	Equipment operations	:	
17.3	Transportation of BMW	:	No. of Drivers: No. of Helpers:
17.4	Sanitation and others	:	
17.5	Total persons excluding managers	:	
18.0	Collection and Transportation of bio-medical waste from member HCFs :		
18.1	No. of Vehicles used for collection of waste from member HCFs	:	(i) Four Wheelers:Nos and Vehicle Numbers: (ii) Two Wheelers :.....Nos and Vehicle Numbers:.....
18.2	Vehicles are labeled as per BMWM Rules, 2016	:	<input type="checkbox"/> Satisfactory <input type="checkbox"/> No satisfactory
18.3	Vehicles used are as per CPCB Guidelines	:	<input type="checkbox"/> Satisfactory <input type="checkbox"/> No satisfactory
18.4	Vehicles attached with the GPS provision as per BMWM Rules 2016	:	<input type="checkbox"/> Satisfactory <input type="checkbox"/> No satisfactory
18.5	Whether waste collected from member HCFs adopted Bar coding system ?	:	<input type="checkbox"/> Yes <input type="checkbox"/> No

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S.No.	Details	Particulars												
19.0	Temporary untreated waste storage area	: <input type="checkbox"/> Satisfactory <input type="checkbox"/> No satisfactory												
20.0	Mode of conveyance of bio-medical waste from untreated waste storage area to the treatment equipment within the CBWTF	: <input type="checkbox"/> Closed Trolley/Pull cart with bio-hazard symbol <input type="checkbox"/> No Closed Trolley/Pull cart <input type="checkbox"/> Others like												
21.0	Treatment equipment installed at CBWTF													
21.1	Incinerator/plasma pyrolysis capacity and make	: (i) No. of Incinerators including standby: (ii) Incineration capacity: kg /hrKg/day.												
21.2	Daily Operation schedule of the incinerator /plasma pyrolysis (timings)	:AM toPM (or)PM toAM Whether bio-medical waste collected from member HCFs is treated during holidays: Yes <input type="checkbox"/> No <input type="checkbox"/>												
21.3	Consumption of auxiliary fuels	: <table border="1"> <thead> <tr> <th>S. No</th> <th>Type of Fuel</th> <th>Consumption Quantity in liters per day</th> <th>Bill numbers of purchase of fuel</th> </tr> </thead> <tbody> <tr> <td>a)</td> <td></td> <td></td> <td></td> </tr> <tr> <td>b)</td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	S. No	Type of Fuel	Consumption Quantity in liters per day	Bill numbers of purchase of fuel	a)				b)			
S. No	Type of Fuel	Consumption Quantity in liters per day	Bill numbers of purchase of fuel											
a)														
b)														
21.4	Stack attached with the incinerator /plasma pyrolysis	: (i) Stack Diameter: m (ii) Stack Height : m above Ground Level												
21.5	Monitoring provision attached with the stack	: <input type="checkbox"/> Platform <input type="checkbox"/> Porthole <input type="checkbox"/> access to the platform (Steps/Monkey Ladder/any other.....)												
21.6	Is stack monitoring provision satisfactory and as per CPCB guidelines	: <input type="checkbox"/> Yes <input type="checkbox"/> No												
21.7	air pollution control systems attached with the incinerator/plasma pyrolysis	: (i) Quenching : <input type="checkbox"/> Yes <input type="checkbox"/> No (ii) Venturi scrubber : <input type="checkbox"/> Yes <input type="checkbox"/> No (iii) Droplet separator : <input type="checkbox"/> Yes <input type="checkbox"/> No (iv) Mist eliminator : <input type="checkbox"/> Yes <input type="checkbox"/> No (v) Filters : <input type="checkbox"/> Yes <input type="checkbox"/> No (vi) Lime and Activated Carbon injection: : <input type="checkbox"/> Yes <input type="checkbox"/> No												

S.No.	Details	Particulars
		(vii) ID Fan : <input type="checkbox"/> Yes <input type="checkbox"/> No (viii) Any other : (Pl. indicate)
21.8	Waste feeding mechanism	(i) Manual feeding : <input type="checkbox"/> Yes <input type="checkbox"/> No (ii) PLC based Automatic feeding : <input type="checkbox"/> Yes <input type="checkbox"/> No
21.9	Is PLC and automatic recording system (for recording operating parameters of the incinerator) attached with the incinerator/plasma pyrolysis	(i) PLC synchronized with waste feeding mechanism & in working condition: <input type="checkbox"/> Yes <input type="checkbox"/> No (I) PLC synchronized and recording system attached with incinerator and in working condition: <input type="checkbox"/> Yes <input type="checkbox"/> No
21.10	Operational conditions of the Incineration/plasma pyrolysis as observed during the visit	(i) Whether burners in working condition: <input type="checkbox"/> Yes <input type="checkbox"/> No (ii) Temperature maintained in Primary Chamber (range) : ^o C (iii) Temperature maintained in Secondary Chamber (range):..... ^o C (iv) Negative draft in Primacy Chamber :mm of water column (v) Pressure drop in the Venturi: mm of water column
21.11	Is continuous on-line monitoring system/Flue gas analyser attached with the incinerator/plasma pyrolysis for flue gas analysis (i.e CO, O ₂ and CO ₂)	(i) Is continuous online monitoring system (COMS) attached with incinerator: <input type="checkbox"/> Yes <input type="checkbox"/> No (ii) Observed values of flue gas parameters: CO ₂ : .%, O ₂ : % and CO: % (iii) Observed Combustion Efficiency:% (iv) Observed values of stack emissions as per COMS
21.12	Emergency and Fire safety measures adopted within the facility is adequate	Is Emergency stack attached with the incinerator: <input type="checkbox"/> Yes <input type="checkbox"/> No Whether fire safety measures adopted (Fire Extinguishers, Sand buckets etc.): <input type="checkbox"/> Yes <input type="checkbox"/> No
21.13	Log book for incinerator/ plasma pyrolysis is maintained and satisfactory	Log Book Maintained: <input type="checkbox"/> Yes <input type="checkbox"/> No Log Book Maintained is satisfactory : <input type="checkbox"/> Yes <input type="checkbox"/> No

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S.No.	Details	Particulars
21.14	Details of heat recovery system installed with incinerator/plasma pyrolysis	: <input type="checkbox"/> Yes <input type="checkbox"/> No
22.0	Capacity of autoclave and-- make	: Autoclave of capacitykg/cycle and make installed.
22.1	Operating conditions of autoclave/microwave as observed during the visit	: Operating parameters observed: (i) Temperature : in °C (ii) Pressure : in psi (iii) Residence time : in minutes
22.2	Provision made for the autoclave /microwave	: Trolley for waste feeding : <input type="checkbox"/> Yes <input type="checkbox"/> No Graphic or computer recording device attached: <input type="checkbox"/> Yes <input type="checkbox"/> No
22.3	Spore test or strip test conducted regularly and records maintained	: <input type="checkbox"/> Yes <input type="checkbox"/> No Pl. indicate frequency of Strip test conducted: every batch /once in a week /quarterly /yearly Pl. indicate frequency of Spore test conducted: every batch /once in a week /quarterly /yearly
22.4	Performance of autoclave by spore testing or routine test	: <input type="checkbox"/> Satisfactory <input type="checkbox"/> Not satisfactory
22.5	Log book maintained for autoclave is satisfactory	: Log Book Maintained: <input type="checkbox"/> Yes <input type="checkbox"/> No Log Book Maintained is satisfactory : <input type="checkbox"/> Yes <input type="checkbox"/> No
23.0	Capacity of shredder and make	: kg/hr. Self-designed & got fabricated locally.
24.0	Details of sharp pit / Encapsulation facility	: (i) Sharp Pit provided : <input type="checkbox"/> Yes <input type="checkbox"/> No (ii) Is it as per CPCB guideline : <input type="checkbox"/> Yes <input type="checkbox"/> No (iii) Records maintained : <input type="checkbox"/> Yes <input type="checkbox"/> No (iv) Total quantity of waste sharps stored: (v) Total quantity of waste sharps treated and disposed:
25.0	Water Balance	
25.1	Source and quantity of water intake per day (cu.m / day)	: Water consumption source: Water is drawn at KLD approximately. Is magnetic water flow meter attached to the water source/water storage tank : <input type="checkbox"/> Yes <input type="checkbox"/> No

S.No.	Details	Particulars														
		<p>Magnetic water flow meter readings as per record (for last month): 1st Day of Month : Last day of month : Magnetic Flow meter as observed during the visit:</p> <table border="1"> <thead> <tr> <th rowspan="2">S. No</th> <th rowspan="2">Month</th> <th colspan="2">Magnetic flow meter reading</th> </tr> <tr> <th>Initial</th> <th>Final</th> </tr> </thead> <tbody> <tr> <td>(1)</td> <td>Previous month</td> <td></td> <td></td> </tr> <tr> <td>(2)</td> <td>On the date of visit:.....</td> <td></td> <td></td> </tr> </tbody> </table> <p>If water requirement is met from outside through tankers, pl. provide No. of Tankers procured in a previous six months: Total quantity of water consumed during the previous six months : in KLD</p>	S. No	Month	Magnetic flow meter reading		Initial	Final	(1)	Previous month			(2)	On the date of visit:.....		
S. No	Month	Magnetic flow meter reading														
		Initial	Final													
(1)	Previous month															
(2)	On the date of visit:.....															
25.2	Break up of water usage (such as washing, scrubbing etc.)	: Scrubber – KL/hr or KLD Washing – KLD Disinfections – KLD Gardening – KLD Domestic – KLD														
26.0	Total wastewater effluent generated per day	: AboutKLD generated Quantity of treated water reused/recycled in %: Any other mode of disposal:														
27.	Effluent treatment plant details															
27.1	ETP Capacity	: KL/Cycle														
27.2	Flow Chart of ETP	: ETP comprising of: Unit operations														
27.3	Intake and Discharge of ETP	: (i) Magnetic Flow measuring device provided at the outlet of ETP: <input type="checkbox"/> Yes <input type="checkbox"/> No (ii) Energy meter attached to the ETP: <input type="checkbox"/> Yes <input type="checkbox"/> No (iii) Energy consumed over a period of one month: = Units (iv) pH meter attached at the outlet of ETP: <input type="checkbox"/> Yes <input type="checkbox"/> No														

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S.No.	Details	Particulars
27.4	Final mode of disposal of treated water	(i) Is treated wastewater complying with the discharge norms <input type="checkbox"/> Yes <input type="checkbox"/> No (ii) Is Treated water is reused in the scrubber: <input type="checkbox"/> Yes <input type="checkbox"/> No (ii) Is Treated water is reused for gardening: <input type="checkbox"/> Yes <input type="checkbox"/> No (iii) Is Treated water is discharged in drain: <input type="checkbox"/> Yes <input type="checkbox"/> No (iv) Is Treated water is discharged in open area: <input type="checkbox"/> Yes <input type="checkbox"/> No
28.	Status of infrastructure provided (Pl. indicate 'Yes / No' whichever is applicable)	
28.1	Separate treatment equipment room	<input type="checkbox"/> Yes <input type="checkbox"/> No
28.2	Main waste storage room	<input type="checkbox"/> Yes <input type="checkbox"/> No
28.3	Treated waste storage room	<input type="checkbox"/> Yes <input type="checkbox"/> No
28.4	Administrative room	<input type="checkbox"/> Yes <input type="checkbox"/> No
28.5	Generator set	<input type="checkbox"/> Yes <input type="checkbox"/> No
	(i) Capacity	
	(ii) Is Stack attached as per DG Set norms	<input type="checkbox"/> Yes <input type="checkbox"/> No
	(iii) Is Acoustic enclosure provided as per DG Set norms	<input type="checkbox"/> Yes <input type="checkbox"/> No
	(iv) Is DG Set complying to the emissions norms and noise level norms	<input type="checkbox"/> Yes <input type="checkbox"/> No If so, pl. indicate latest monitoring results:
28.6	Site security (high walls, fencing, guarded gates etc.)	High walls on all four sides : <input type="checkbox"/> Yes <input type="checkbox"/> No Fencing on all the sides : <input type="checkbox"/> Yes <input type="checkbox"/> No Guarded Gates : <input type="checkbox"/> Yes <input type="checkbox"/> No Any other observation pl indicate:.....

S.No.	Details		Particulars	
28.7	Parking facility	:	<input type="checkbox"/> Yes	<input type="checkbox"/> No
28.8	Sign board	:	<input type="checkbox"/> Yes	<input type="checkbox"/> No
28.9	Green belt	:	<input type="checkbox"/> Yes	<input type="checkbox"/> No
28.10	Washing room	:	<input type="checkbox"/> Yes	<input type="checkbox"/> No
28.11	First aid box	:	<input type="checkbox"/> Yes	<input type="checkbox"/> No
28.12	Lighting arrangements in the facility	:	<input type="checkbox"/> Yes	<input type="checkbox"/> No
28.13	Odour problem remedial measures	:	<input type="checkbox"/> Yes	<input type="checkbox"/> No
28.14	Fire fighting and emergency facilities	:	<input type="checkbox"/> Yes	<input type="checkbox"/> No
28.15	Measures for control of pests / insects etc.	:	<input type="checkbox"/> Yes	<input type="checkbox"/> No
28.16	Protective gear for waste handlers	:	<input type="checkbox"/> Yes	<input type="checkbox"/> No
28.17	Telephone facility	:	<input type="checkbox"/> Yes	<input type="checkbox"/> No
28.18	Provision of washing, toilets and safe place for eating for the workers		<input type="checkbox"/> Yes	<input type="checkbox"/> No
28.19	Fire alarm system provided in the facility		<input type="checkbox"/> Yes	<input type="checkbox"/> No
29.	Record maintenance and record keeping details (Pl. indicate 'Yes / No' whichever is applicable)			
29.1	Waste Movement /Manifest record	:	<input type="checkbox"/> Yes	<input type="checkbox"/> No
29.2	Log book for treatment equipment	:	<input type="checkbox"/> Yes	<input type="checkbox"/> No
29.3	Site records	:	<input type="checkbox"/> Yes	<input type="checkbox"/> No
29.4	Incineration ash generation and final disposal records	:	<input type="checkbox"/> Yes	<input type="checkbox"/> No
29.5	Treated plastic waste generation and its sale to the registered recycler	:	<input type="checkbox"/> Yes	<input type="checkbox"/> No
29.6	Syringes treated and its final disposal record	:	<input type="checkbox"/> Yes	<input type="checkbox"/> No

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S.No.	Details	Particulars
29.7	Workers health status records	<input type="checkbox"/> Yes <input type="checkbox"/> No
29.8	Workers immunization records	<input type="checkbox"/> Yes <input type="checkbox"/> No
29.9	Medical and para-medical workers training records	<input type="checkbox"/> Yes <input type="checkbox"/> No
29.10	Whether records maintained with regard to the accidents (such as fire, spills and injury and measures taken)	<input type="checkbox"/> Yes <input type="checkbox"/> No
30.	Collection and transportation status (Yes / No)*	
30.1	Whether waste collected in a container of similar colour with label as per the Rules?	: <input type="checkbox"/> Yes <input type="checkbox"/> No
30.2	Whether the person who collects BMW maintain a register with him / her?	: <input type="checkbox"/> Yes <input type="checkbox"/> No
30.3	Has due attention have been given in vehicles to prevent spillage / pilferage/ loading / unloading etc.?	: <input type="checkbox"/> Yes <input type="checkbox"/> No
30.4	Is the vehicle labeled with the symbol and display the name, address, telephone number etc.?	: <input type="checkbox"/> Yes <input type="checkbox"/> No
30.5	Does the CBWTF operator use satellite station to store the waste?	: <input type="checkbox"/> Yes <input type="checkbox"/> No (If yes, give details.....)
30.6	The CBWTF operator collects waste daily or alternate day including	: <input type="checkbox"/> Yes <input type="checkbox"/> No

S.No.	Details	Particulars
	holidays?	
30.7	Whether waste treatment criterion of 48 hours is complied?	<input type="checkbox"/> Yes <input type="checkbox"/> No
31.	Disposal of treated waste:	
31.1	Plastic waste after treatment	Plastic waste Sold to: M/s. and approved bySPCB/PCC
31.2	Treated sharps	Treated syringes disposal by:..... or through M/s.....and approved bySPCB/PCC
31.3	Incineration ash	Incineration ash disposal by: Disposal in Sanitary Landfill: <input type="checkbox"/> Yes <input type="checkbox"/> No Disposal through TSDF: <input type="checkbox"/> Yes <input type="checkbox"/> No Any other mode :
31.4	Other treated solid wastes	
31.5	Oil & grease	
31.6	Treated wastewater	
32.	Frequency of incinerator / autoclave / microwave / hydroclave / ETP discharge effluent testing and name of the laboratory (specify approved or not under E(P) Act, 1986 or NABL Accredited Lab.). Give details of compliance / non-compliance)	(i) Reported monitoring frequency: (ii) Stack monitoring : Quarterly <input type="checkbox"/> Yes <input type="checkbox"/> No (iii) Waste water : Monthly/Quarterly/Yearly (iv) Incineration ash : Monthly/Quarterly/Yearly (v) Name of the Laboratory conducted test:
32.1	Frequency of site inspection by SPCBs/PCCs/CPCB/any other agencies	(i) No. of times in a year inspected by the SPCB/PCC: (ii) No. of times in a year inspected by the CPCB

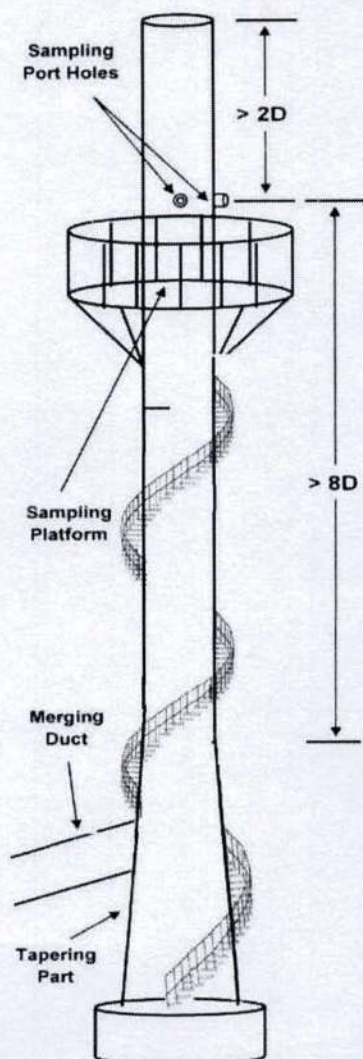
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S.No.	Details	Particulars																					
33.	Monitoring Results :																						
33.1	Incinerator stack emission (parameters stipulated in the Rules, temperature attainment in the chambers, residence time in the secondary chamber etc.)	<table border="1"> <thead> <tr> <th>Parameter</th> <th>PM</th> <th>HCl</th> <th>NOx</th> <th>Hg & compounds</th> <th>Dioxins and Furans</th> <th>C.E.</th> </tr> </thead> <tbody> <tr> <td>Date</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>LIMIT</td> <td>50</td> <td>50</td> <td>400</td> <td>0.05</td> <td>0.1 ng TEQ per Nm³</td> <td>99.00%</td> </tr> </tbody> </table> <p>Date of monitoring: Note: All values are in mg/Nm³, except CE</p>	Parameter	PM	HCl	NOx	Hg & compounds	Dioxins and Furans	C.E.	Date							LIMIT	50	50	400	0.05	0.1 ng TEQ per Nm ³	99.00%
Parameter	PM	HCl	NOx	Hg & compounds	Dioxins and Furans	C.E.																	
Date																							
LIMIT	50	50	400	0.05	0.1 ng TEQ per Nm ³	99.00%																	
33.2	Whether Stack emission norms are complied with by the CBWTF	<input type="checkbox"/> Yes <input type="checkbox"/> No																					
33.3	Incineration ash characteristics	Characteristics as per Schedule –II of HOW (M&TM) Rules,2016 (Annexure-----) Is it hazardous waste as per HOWM&TM Rules, 2016: <input type="checkbox"/> Yes <input type="checkbox"/> No																					
33.4	ETP inlet/outlet characteristics	All values are in mg/l except pH <table border="1"> <thead> <tr> <th>Parameter</th> <th>pH</th> <th>TSS</th> <th>COD</th> <th>BOD</th> <th>O&G</th> </tr> </thead> <tbody> <tr> <td>ETP Inlet Result</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>ETP Outlet Result</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	Parameter	pH	TSS	COD	BOD	O&G	ETP Inlet Result						ETP Outlet Result								
Parameter	pH	TSS	COD	BOD	O&G																		
ETP Inlet Result																							
ETP Outlet Result																							
33.5	Whether liquid effluent discharge norms are complying by the CBWTF	<input type="checkbox"/> Yes <input type="checkbox"/> No																					
33.6	Whether CBWTF is submitting the annual report within the due date for the preceding year	<input type="checkbox"/> Yes <input type="checkbox"/> No If Yes, annual report submitted vide letter No..... dated.....																					
34.	Any other relevant observations	(pl. enclose as annexure)																					
35.	Name of the officials with designation inspected /monitored the CBWTF and the signature																						

Annexure-VI

STATIONARY SOURCE EMISSION MONITORING

MODIFICATIONS TO BE MADE TO SAMPLING PLATFORM AND SAMPLING PORT HOLE



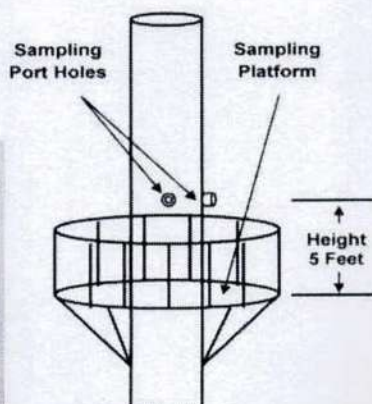
Number of Port Holes : Minimum two numbers of Port Holes at 90° apart from each other at a horizontal plane.

Location of Port Holes : Minimum 8 times of Internal Diameters of Stack downstream (upward direction of stack) from any duct confluence, bends and tapering & minimum 2 times of Internal Diameters of Stack upstream (downward direction of stack) from stack exit.

Location of Sampling Platform : 5 feet upstream (downward direction of stack) from the Port Hole as determined above.

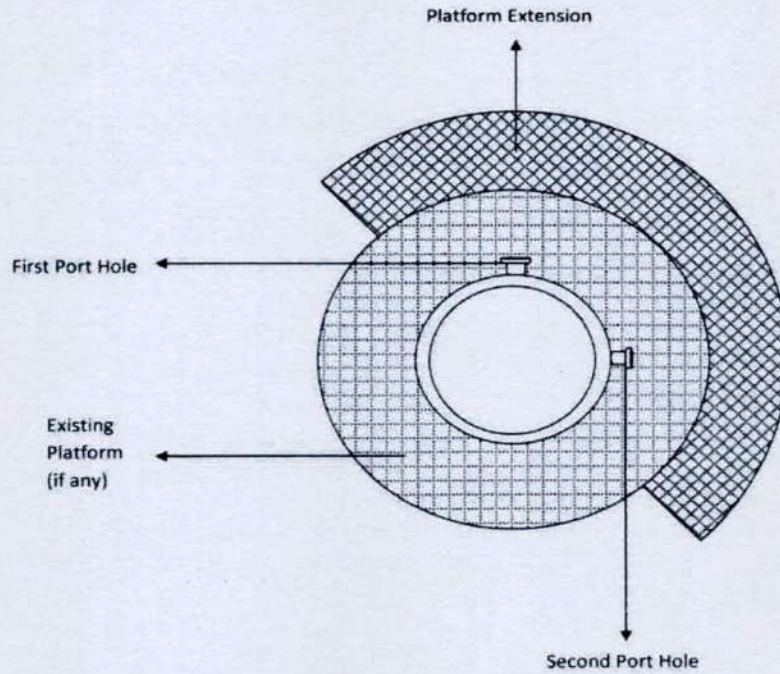
Port Hole Flange : If the internal diameter of the flange is 4 inch or more then there is no need to change, if it is less than 4 inch than it has to be replaced with 4 inch flange. The flange should not protrude out more than 6 inches from the outer wall of the stack (it shall be kept as less as possible).

Sampling Platform Modification : A semi-circular extension of the existing platform (width extending outward by 5 feet from outside wall of the stack and covering at least one third of the circumference) may be provided for access to both the Port Holes. This area can be extended from the existing Platform and if deemed necessary for safety of the personnel a counter extension in opposite direction may also be provided. The extended Platform shall be strengthened with requisite support from the stack.

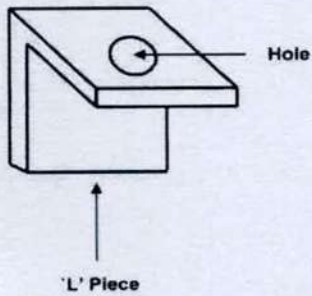


Note: Alternatively, safe access to monitoring platform may be provided with separate scaffolding-cum-staircase arrangement

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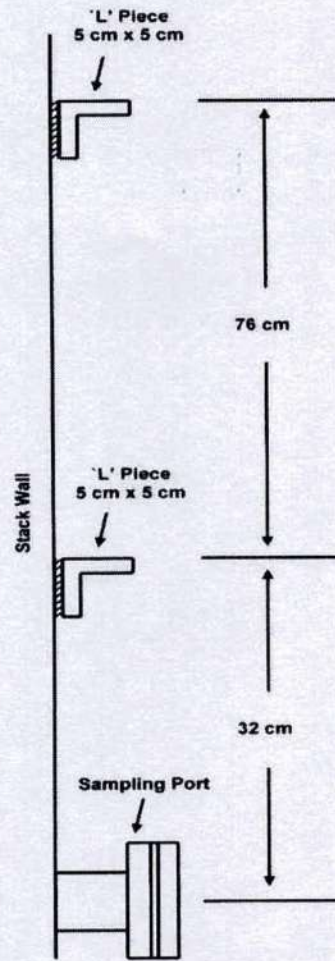


Sampling Platform Modification / Extension



Fixing of 'L' Pieces on the stack wall : Two 'L' shaped pieces are to be fixed on the stack wall for mounting the Mono-Rail & Chain (part of the Sampling Kit for movement of sampling Train in & out through the Sampling Port Hole). The 'L' pieces shall be made of approximately 6 mm thick galvanized iron to have 5 cm long arms. One arm of the 'L' piece shall be welded on the stack wall and another arm shall have a hole of 14 mm diameter near the open end. Both the 'L' Pieces shall be welded on the stack wall at specified distances (as shown in the diagram on the next page) from the centre of Sampling Port Hole (in a vertical axis on the Stack Wall).

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Fixing of 'L' Pieces on the Stack Wall

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REFERENCES

1. Bio-medical Waste Management Rules, 2016.
2. CPCB Guidelines for CBWTFs (2003).
3. CPCB Guidelines for BMW Incinerators (2003).
4. 'Disposal of Bio-medical Waste generated during Universal Immunization Programme' issued by CPCB.
5. 'Guidelines for Environmentally Sound Management of Mercury Waste Generated from the Health Care Facilities' issued by CPCB.
6. Annual Report 2014 submitted to CPCB by the SPCBs/PCCs.
7. Stationary Source Emission Monitoring –Modifications to be made to the Sampling Platform and Sampling Port Hole issued by National Reference Trace Organics Laboratory (NRTOL), CPCB.

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भारत सरकार, नई दिल्ली
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