



भारत सरकार Government of India
रेल मंत्रालय Ministry of Railways
(रेलवे बोर्ड Railway Board)



No.2021/EnHM/22/08

New Delhi dated. 05.06.2022


**The General Manager,
All Zonal Railways &
Production Units**

Sub: Audit observations on Performance Audit Report No. 16 – 'Waste Management in Indian Railways'.

Please find enclosed herewith Audit's Observations on Report No. 16 of 2022 regarding 'Waste Management in Indian Railways'.

2. It is requested that comments on aforesaid audit observations may please be furnished to Railway Board office by **09.06.2023 positively** for onward submission to Audit. Soft copy of the reply may also be emailed at advenhm@rb.railnet.gov.in

Enclose:- Performance Audit Report No.16.
(263 Pages)


(Shailendra Singh)
Executive Director/ME (EnHM & Proj.)
Railway Board

Copy to: i) PCMEs/IR;
ii) PFAs/IR;
iii) DF (BC)/Railway Board, for kind information.

URGENT
AUDIT MATTER**No. 2022-BC-AP-ReportNo16of2022/2019-20****dated: 01.06.2023**

Please find enclosed Audit's Observations dtd. 26.05.2023 (copy enclosed) on Report No. 16 of 2022 regarding '**Waste Management in Indian Railways**'.

It is requested that comments on aforesaid audit observations may please be furnished to BC Dte. by **15.06.2023** for onward submission to Audit. Soft copy of the reply may also be e-mailed at kaushik.neelam@gov.in.

Encl: as above

Signed by Anita Bhatt
Date: 01-06-2023 14:39:19
Reason: Approved

(Anita Bhatt)
Dy. Director/Finance(BC)-I

Para Nos.	Officers concerned
Chapter-1 and 3(complete) Chapter-2(2.1, 2.3, 2.6, 2.10 to 2.13 Chapter-4(4.1, 4.2, 4.4-4.7)	ED/EnHM (ME & Proj)
Chapter-2(2.2 and 2.5)	DIG/Security
Chapter-2 (2.8)	ED/Plg.
Chapter-2 (2.3, 2.9)	ED/T&C
Chapter-2 (2.4, 2.5) and Chapter-4(4.3)	ED/L&A
Chapter-5	ED H(G)
Chapter-6	ED/RS(S)


Office of the Deputy Comptroller and Auditor General (Railways)
Railway Board Audit,
Room No. 222, Rail Bhawan, New Delhi

Sub: Audit Para C&AG Report No.16 of 2022 regarding "Waste Management in Indian Railways"

Ref: U.O. No. 2022-BC-AP-REPORT No 16 of 2022/20-21 dated: 28-2-2023

The further Audit Comments on the Action Taken Note of Ministry of Railways (Railway Board) are enclosed.

This issued with the approval of PD (RBA).


Sr. Admn. Officer,
Railway Board Audit.

Sh. R. D. Pathak, Director Finance (BC), MOR, Railway Board, New Delhi

Principal Director (RBA) U O No. 101 /RAII/12-10/WM-ATN/2023 Dated: 26 -05-23

AUDIT OBSERVATIONS IN RESPECT OF ATN ON C&AG Report No.16 of 2022 regarding “Waste Management in Indian Railways”.

Chapter 2 Waste Management at Railway Stations, Catering Units and Coaching Depots			Further Audit Comments
	Audit observations	MoR Reply	
Audit Objective 1	<p><i>Whether the assessment, management and disposal of waste generated at Railway stations, Catering units and Coaching depots was done as per applicable laws and rules</i></p> <p>Effective management of huge quantum of waste/garbage generated at stations requires continuous action by Railways authorities for assessment, segregation, collection, storage and disposal of the same. Rules framed under statute (Solid Waste Management Rules, 2016, Plastic Waste Management Rules, 2016, Environment (Protection) Act, 1986, Water Act, 1974), instructions issued by SPCBs/CPCB and National Green Tribunal, recommendations of Public Accounts Committee (PAC) as well as the instructions of Railway Board are required to be complied with in this regard. The results of effectiveness and efficiency of Railways in the waste management process at stations, catering units and coaching depots as assessed in Audit is brought out in succeeding paragraphs.</p>		
2.1 Establishment of EnHM Wing	Public Accounts Committee (PAC)- Fourteenth Lok Sabha, in its 83 rd Report recommended (February, 2009) that the Ministry of Railways should strengthen the coordination efforts and put in place an institutionalised mechanism at		It has been observed that EnHM wing has still not been constituted or are operating without adequate manpower in some of the divisions of ER, NFR and NCR. It is clear that still setting up of EnHM wings at Zonal,

	<p>the Apex level as also for framing a robust policy on Waste Management. Accordingly, Environment and Housekeeping Management (EnHM) Directorate was setup in Railway Board vide office order No. 28/2015 dated 7 April 2015. Subsequently, Railway Board directed all Zonal Railways (August 2015) to establish EnHM wings in the Zonal offices as well as in Divisions.</p> <p>Railway Board's circular (August 2015) specifying the scope and formation of EnHM wing at Zonal /Divisional level called for co-ordination and monitoring of all environment related issues. The instructions issued also covered integration of housekeeping functions of major railway stations, coaching trains and coaching depots by the EnHM wings under the control of GM & CME in Zonal Railways and DRM and Sr. DME in the divisions.</p> <p>EnHM wing was required to manage the Budget for Housekeeping of the stations and coaching trains which included cleanliness and sanitation of stations, coaches and railway colonies⁶. No clear demarcation of the waste management activities (in budget proposals) was, however, mentioned in the instructions issued by the Ministry of Railways.</p>	<p>CR: EnHM wing has been established at Pune & Solapur division.</p> <p>ER: With supervisors specifically looking after EnHM work. All Divisions have</p>	<p>Divisional & Station level has not been ensured in all the zones. Reasons for this along with action taken to rectify discrepancy this may be furnished to audit.</p>
--	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

	<p>Audit randomly selected 109 stations across all the 17 Zones (Annexure-1.4) to assess the implementation of Railway Board's orders in respect of functioning of EnHM wings at Zonal/Divisional level. Audit observed the following:-</p> <p>i. Railways have taken positive steps in establishing EnHM wings in all the zones and in 43 out of 54 Divisions test checked by audit.</p> <p>ii. In 11 divisions⁷, EnHM wings were not established during the review period.</p> <p>iii. Instructions were not issued for regular monitoring of aspects related to management of waste in 13 divisions⁸, which included eleven divisions where the wing had not been formed and two other divisions in NCR where though the wing was formed but no instructions related to monitoring management of waste were found on record.</p> <p>iv. There is no single body/agency in Indian Railways taking ownership of waste management related issues. EnHM wings were formed to undertake monitoring and coordination function for all environment related issues, while planning, sanction and execution of environment related works was left to be dealt by the concerned department</p>	<p>nodal EnHM officer (ADRM) and also nominated JAG EnHM officer looking after EnHM activities.</p> <p>NFR: With regard to Lumding division, ADRM is the nodal officer. Sr.DCM/Lumding is the co-ordinating officer. Formation of EnHM wing has already been initiated in Lumding division. Rangiya (RNY) division is concerned, under ADRM, Sr.DME/RNY is the co-ordinating officer. As per NGT guidelines, staffs assigned to monitor and implement EnHM related works have already been identified at</p>	<p>ER- As per Railway Board's policy guidelines, dedicated EnHM wing was to be set up at Zonal HQ. and at Divisions.</p> <p>In Eastern Railway, no such dedicated wing has been formed at Asansol and Malda Division. Further, wherever EnHM Wing has been formed (in HQ. and in Howrah and Sealdah Divisions), the same are functioning in skeleton form without required manpower.</p> <p>Moreover, as per Railway Board's instructions, EnHM wing should be formed with proper representation from Mechanical, Traffic/Commercial, Engineering and Electrical branches in order to carry the expertise already gained on this subject for improving the effectiveness in functioning of the new EnHM Wing. None of the Wing wherever formed was functioning with such representation from the required branches.</p> <p>NFR- <u>Remarks on Formation of EnHM Wing.</u> Lumding Division: No EnHM Wing</p>
--	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

	<p>such as commercial and engineering.</p> <p>Ministry of Railways stated (May 2022) that duties related to EnHM wing have been allotted to Mechanical Department where EnHM wing has not been set up. Reply is not acceptable as same level of dedication is unlikely from Mechanical directorate since co-ordination and monitoring of all environment related issues was the sole objective of setting up EnHM wing.</p> <hr/> <p>⁶ <i>Railway colonies not covered in this Performance Audit</i></p> <p>⁷ <i>CR- Pune & Solapur, ER- Sealdah & Malda; NFR- Lumding, Rangiya & Katihar & NR- Ambala, Delhi, Lucknow & Moradabad</i></p> <p>⁸ <i>CR-Pune & Solapur, ER- Sealdah & Malda; NCR- Prayagraj & Agra, NFR- Lumding, Rangiya & Katihar, NR- Delhi, Lucknow, Moradabad & Ambala</i></p>	<p>divisional level. For Katihar (KIR), Divisional wing comprising of ADRM as chairman, Sr.DME/KIR as nodal officer and ADEN/Spl./KIR and ACM/KIR are the members for monitoring EnHM activities.</p> <p>NFR: Accountable entities are under the orders of formation. After formation of accountable entities, joint inspections will be conducted regularly. As far as Hojai is not a NGT nominated station in NFR</p> <p>NR: EnHM wing has been established over Ambala, Delhi, Lucknow & Moradabad divisions of NR.</p> <p>CR: The work of EnHM is monitored by AEnHM in Pune division & by Sr.DMO in Solapur division.</p> <p>All GMs/IR are being advised to establish EnHM wing at all Divisional level at the earliest and to issue instructions for regular monitoring of aspects related to management of waste. Waste disposal/management is a collective task, therefore, being performed in coordination of commercial, Engineering</p>	<p>was established at Divisional Level. Rangiya Division: No EnHM Wing was established at Divisional Level. Katihar Division: EnHM Wing was established at Divisional Level w.e.f. 14.11.2022.</p> <p>.</p> <p>NFR- <u>Remarks of Accountable entities.</u> Accountable Entities were formed in Katihar Division only. Joint Inspection was not conducted in Divisions. Records related to Hojai as NGT Station was not available</p> <p>NCR- In North Central Railway, EnHM wing at Agra division has been established. Whereas, at Prayagraj division, accountable entities were</p>
--	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

		and other departments.	<p>constituted to monitor and implement various issues related to solid waste disposal, littering of solid and plastic wastes etc. Further, in Jhansi division, the responsibility of EnHM matters is divided among engineering, mechanical and commercial department. However, proposal for EnHM committee for NGT stations in Jhansi division is pending for approval with the operating department.</p> <p><i>It is clear from the above that still setting up of EnHM wings at Zonal, Divisional & Station level has not been ensured in all the zones. Now, as stated by MoR, they have advised all the zones for positive action; which required to be monitored for proper implementation.</i></p>
2.1.1 Budget allocation and expenditure	<p>EnHM wing is required to manage the Budget for Housekeeping of the stations and coaching trains. Railways are maintaining expenditure incurred on cleanliness related issue, which includes station, coach sanitation⁹ and sanitation in railway colony. Budget allocation and expenditure incurred there from is shown in the Table 2.1 below:-</p> <p>Table 2.1 - Details of Budget allocation and Expenditure (` in crore)</p>	Noted please, no comment.	No further comments.

Year	Budget Allocation	Actual Expenditure	Percent utilization
2016-17	1751	1640	94
2017-18	2026	1874	92
2018-19	2281	2156	95
2019-20	2796	2721	97
2020-21	2081	1987	95

Note:-Includes Coach Sanitation, Station sanitation and Sanitation of Railway colonies. Sanitation of colonies not covered in this Report.

However, planning, sanction and execution of environment related works¹⁰ were left to be dealt by concerned departments (Commercial and Engineering). Provision of funds for environment related works (ERWs) was made as an itemized one or on lump sum basis (equal to one *per cent* of the cost of work). Certain items related to waste management like provision of ETPs/STPs, WRPs, ACWPs, waste to compost, waste to energy plants *etc.* were included in the specified list of ERWs. These works are to be managed by EnHM wing of the Zone/Division/PUs. Progress on these works and utilisation of funds vis a vis provision has

	<p>been given in detail in para 4.5.</p> <p>It is observed that the environment and housekeeping covered a vast area with management of waste a part of it. EnHM wings at different levels as mentioned in Para 1.2 was formed to oversee cleanliness, sanitation apart from waste management. No separate authority with clear role and responsibility was assigned the waste management task as also there was no demarcated fund allocation for waste management exclusively. Further, although more than 90 <i>per cent</i> of the budget allocation stands utilised during the period 2016-17 to 2020-21, progress on managing different kinds of waste is not encouraging as brought out in succeeding chapters.</p> <hr/> <p><i>⁹Coach sanitation included onboard housekeeping, clean train stations, mechanical coach cleaning , pest and rodent control and any other activity of coach</i></p> <p><i>¹⁰ Environment related works such as water conservation, Sewage and effluent treatment plants, solid waste management infrastructure, water efficient fixtures and measures for mitigation of Air and Water pollution during construction and maintenance etc</i></p>		
2.2	The National Green Tribunal (NGT), Principal Bench, New Delhi, in their order dated 1	With regard to SWR, accountable entities are now available at SBC division, in that	It has been observed that constitution of Accountable entities at Zonal,

Constitution of Accountable entities	<p>October 2018 (OA No. 141/2014) directed the Ministry of Railways to identify three accountable entities. The order specified that the entity should consist of at least three identified persons at each level (at zonal railway level, at divisional level as well as at every important railway station) to monitor and implement various issues related to solid waste disposal, littering of solid and plastic wastes etc. In compliance with these orders, Ministry of Railways directed¹¹ (5 December 2018) all Zonal Railways to constitute three accountable entities at each level¹².</p> <p>Audit reviewed the implementation of NGT orders on these aspects in case of 109 selected stations and found that requisite accountable entities were not established to monitor the waste management related issues. Further, Accountable entities though constituted were not represented by requisite number of members and meetings/joint inspection was not conducted at all by the accountable entities. The position is indicated in Table 2.1 A below:-</p> <p>Table 2.1 A - Status on constituting accountable entities</p> <table border="1"> <tr> <th>Particulars</th><th>Zonal Railway level</th><th>Divisional level</th><th>Station level</th></tr> <tr> <td>Accountable entities</td><td>ER and</td><td>17</td><td>42</td></tr> </table>	Particulars	Zonal Railway level	Divisional level	Station level	Accountable entities	ER and	17	42	<p>DRM, ADRM, Sr.DEnHM, Sr. DEN, Sr.DEE, Sr.DSTE, SR.DOM, and Sr.DSC as team members. Similarly at station SIG committees are available and frequent inspections are being carried out to review the NGT points and for UBL Division, monthly inspections are being done by the Supervisors level (SIG inspection).</p> <p>With regard to ECR, three identified persons to monitor and implement various issues related to solid waste disposal, littering of solid and plastic wastes have been nominated at ECR HQ. Nominated officers are AGM, CEnHM & DY.CEnHM. ADRM & DEnHM has already nominated in Sonpur division. CHIS & TTES are nominated at Sonpur, Hajipur & Muzaffarpur stations.</p> <p>With regards to NER, At Div. Level being co-ordinated by ADRM/Infra with help of concerned Branch officers. At Station level, CHI/HI have been nominated as concerned entity. At zonal level, being co-ordinated by AGM with the help of PCME, CRSE & Dy. CME/EnHM. SIG team is present in all major stations who are doing regular inspections.</p> <p>With regard to NWR, accountable entities at Zonal, Divisional and station level have</p>	<p>Divisional & Station level is yet to be implemented in certain zones e.g. NFR, SWR, NER and NCR. In certain zones where the accountable entities have been constituted, joint inspection, meetings etc are not being done.(NCR).Measures taken to correct this situation along with timelines may be furnished to audit.</p>
Particulars	Zonal Railway level	Divisional level	Station level								
Accountable entities	ER and	17	42								

	e entities not established	SWR			been nominated. Meetings are being conducted by accountable entities at JU and GADJ stations and divisions have also been instructed that accountable entities should conduct a monthly meeting. With regard to NR, accountable entities have been identified at Zonal level in NR. Accountable entities not established at the Divisional level: Of the 17 divisions identified, three come under the purview of NR, that is, Delhi, Moradabad and Ambala divisions. Accountable entities in these divisions are ADRMS/OP in Delhi, Moradabad and Ambala divisions, and they are assisted by nominated Sr. DME/O&F. At the station level, of the 42 railway stations, 5 pertain to NR. These are - New Delhi, Panipat, Rohtak, Moradabad and Rajpura. Three Supervisors (SS, CHI & CMI) have been identified as accountable entities for NDLS, PNP & ROK Stations. At Moradabad station, 4 supervisors of different departments have been nominated for waste management work, which are, SS, SSE(C&W), CHI and SI/RPF. Accountable entities identified at RPJ station include SS and CHI to oversee cleanliness and waste management related issues. An Anti- littering team has also been formed at all stations in UMB division (including RPJ) consisting of SS, CHI and CTI to curb cases of littering. For
	Accountabl e entities with lesser representati ons than required	ECR, NER and NWR	Seven divisio ns¹³	13 stations¹⁴	
	Meetings not conducted by Accountabl e entities (as <i>detailed in Annexure 2.1)</i>	Seven zones	23	71	

Non-compliance with the important orders of NGT adversely affected the monitoring of the key issues related to waste management as brought out in the subsequent paragraphs.

¹¹ ***letter No. 2018/EnHM/01/02 dated 5.12.2018***

¹² (i) ***At Station level- Station Director/ Station Manager, one Supervisor each from Commercial and Engineering Department.***

(ii) ***At Division level -ADRM, One officer each from Commercial and Engineering Department.***

(iii) ***At Zonal Railway level -AGM, One officer each from Commercial,***

	<p><i>Engineering and Security Department</i></p> <p><i>¹³ ECR-Sonepur, NER-Lucknow; NWR-Ajmer, Jodhpur, Jaipur & Bikaner WCR-Jabalpur;</i></p> <p><i>¹⁴ ECR- Hajipur, Sonepur & Muzzafarpur; NWR- Ajmer, Bikaner, Lalgah, Jaipur, Gandhinagar Jaipur, Jodhpur & Rai Ka Bagh, SECR- Raipur & Gondia, SR-Melmaruvattur.</i></p>	<p>all Railway stations in NR, three entities involved in housekeeping of stations are accountable for waste management, which is a part of housekeeping work. These are Station Manager/Station Superintendent, Chief Health Inspector (CHI)/ Health and Malaria Inspector (HMI) and Commercial Inspector (CMI). As per the Audit report, Meetings/Joint inspections have not been carried out in 4 divisions (MB, DLI, FZR & UMB) and 10 stations of NR (BSB, RBL, BBK, MB, NDLS, PNP, ROK, SVDK, JRC & RPJ). The coordination between accountable entities at various levels, especially that at the divisional and station levels is on a day-to-day basis. In general, formal minutes of meetings are not issued for such meetings. Also, besides the three accountable entities established at each level, several other entities of the same or different departments are accountable for works in their domain.</p> <p>With regard to ECoR, 03 tier accountable committee has been formed in ECoR.</p> <p>With regard to NCR, following is submitted:-</p>	
--	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--

		<p>PRAYAGRAJ DIVISION:- Accountable entities for every important railway station level have been specified to monitor the issues related with Littering solid waste, plastic etc.</p> <p>AGRA DIVISION:- Accountable entities at Zonal, division as well as station level have been specified. Regular meetings & joint inspections are being conducted and proper monitoring for the same is being ensured by accountable entities in Agra division.</p> <p>JHANSI DIVISION:- Accountable entities at Zonal, division as well as station level have been specified. Regular meetings & joint inspections are being conducted and proper monitoring for the same is being ensured by accountable entities in JHS division.</p> <p>With regard to NFR, At Headquarters, under the chairmanship of AGM, PCME is the coordinating officer. Mechanical</p>	
--	--	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--

		<p>and Engineering Departments have three accountable entities at HQ. In divisions, under Additional Divisional Railway Managers, Senior Divisional Commercial Managers / Senior Divisional Mechanical Engineers are nominated as nodal officer. Senior Divisional Commercial Manager is responsible for environment related activities for LMG division. Similarly, Senior Divisional Mechanical Engineers are assigned the role of nodal officer at Katihar, Alipurduar, Rangia & Tinsukia with regard to environmental activities in their respective jurisdictions. Since 2018-19, on every 5th of June, World Environment Day is being observed in which activities connected to environment related and progress of environment related works including waste management is discussed and various future activities are planned for further progress towards environmental management. For ensuring the proper environment management, 12 Nos. of inspections from HQ have been carried out, besides four review meetings were held under the chairmanship of GM, NF Railway.</p> <p>With regard to SR, Melmaruvathur (MLMR) Railway Station does not come under the purview of nominated 72 Railway Stations for implementation of Orders of Hon'ble NGT and therefore Nodal Officer has not been nominated.</p>	
--	--	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--

		<p>SER: Fo Ranchi, observation is factually correct for not conducting any meeting /inspection at station level in 2019-20. SHM has conducted station level meetings in 2020-21 & 2021-22 & RNC conducted meeting in 2018-19.</p> <p>SECR:- Three tiers accountable entities is formed vide letter No. AGM/SECR/002/08/93 dated 24.02.2021 to monitor and implement various issues related to NGT orders and compliances. At HQ- Headed by AGM assisted by committee comprising of CRSE/Chg (Mech.), CHD (Medical), CCM (PS) (commercial), CE(P&D) (Engg.) and CEE (RS&G) (Electrical). At Division-ADRM with concerned Branch Officers - Nodal officer - Sr.DME At Station-Station Director, CSMS and Health Inspectors as nominated by EnHM authority. In 03 divisions BSP, R & NGP, Sr.DMEs are co-ordinating officers. In 20 stations- Nodal officer for each station and supporting staff.</p> <p>WR: At division level & Station level well defined Station Improvement Group has been formed and inspections are being carried out from time to time regularly. Overall position is also reviewed by AGM</p>	
--	--	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--

		<p>at the HQs level during coordination meeting/s held periodically, which are attended by all the concerned HODs.</p> <p>Further, In continuation to Railway Board's <i>letter No. 2018/EnHM/01/02 dated 5.12.2018</i>, All GMs/IR are being advised to identify & constitute accountable entities at least three levels (at zonal railway level, at divisional level as well as at every important railway station) to monitor and implement various issues related to solid waste disposal, littering of solid and plastic wastes etc.</p>	
2.3 Assessment	The Public Accounts Committee- (Fourteenth Lok Sabha) in its 83 rd Report had	<p>CR: Cleanliness contracts are executed according to tender conditions, Measuring</p>	<p>It has been observed that:</p> <p>1. Reasons for awarding</p>

of quantity of waste generated and its proper management	recommended that the Indian Railways must lay down a mechanism whereby the quantum of garbage generated at stations can be assessed realistically so that adequate collection, segregation, and disposal facilities along with necessary infrastructure could be put in place by the Authorities. Ministry of Railways, in its Action Taken Note stated (30 October 2009) that the quantification of garbage is done before tendering for fixing the appropriate agency for garbage disposal work. Position emerging out of the test checked data was found to be contrary to Ministry's claim as indicated in the Table below.	of waste is not included in existing contract. Cleaning /Rag picking contract is ongoing at Igatpuri, Nasik Road, Bhusaval (During Covid 19 situation due to austerity measures contractual staff was reduced.	Cleaning contracts for the combined wastes (bio degradable and non-biodegradable) in some ZR may be furnished to audit.		
	Table 2.2 - Assessment of quantum of waste generation and its segregation		ECR:	2. Final outcome of Construction of shed for material recovery facility (MRF) and creation of composting facility for model zero waste railway station & railway colonies at Varanasi may be furnished to audit.	
		Particulars	Station	Coaching Depots	3. Reasons for discontinuity of garbage disposal contract in various zonal railways and the steps taken to solve the problem may be furnished to audit.
		Assessment not done at all	37	18	4. Reasons for non-availability of Mechanism to assess the quantum of garbage generated in all zonal railways and steps taken to rectify the same may be furnished to audit.
		Assessment done only in some years	18	1	5. Reasons why no contract has been entered into for collection, segregation and disposal of waste and is managed through Station impress in some ZR may be furnished.
		Segregation as bio-degradable/non bio-degradable not done	60	22	
	Segregation as bio-degradable/non bio-degradable done in some of the	17	1		

	<div>years</div> <div>Source:-Information captured from records in Zonal Railways (Annexure 2.2)</div> <div>Audit observed that assessment of quantum of waste generation was either not carried out at all during the period of review or was done sporadically during the review period. Further, segregation of garbage as bio-degradable & non-biodegradable was either not carried out or was carried out in some of the years during the review period. Condition for segregation of waste was also not incorporated in the contract in respect of 109 stations test checked.</div> <div>Ministry of Railways also emphasized that the rag picking contracts along with the garbage disposal contract should also be available at all A1, A, B & C category stations and that those contracts should always be current and their timely renewal be ensured. Review of records of all selected 109 stations and 30 coaching depots revealed that in 23 stations, the cleaning contracts including the rag picking contracts lacked continuity (Annexure-2.2). The period of discontinuation varied widely as shown below:-</div> <div> <ul style="list-style-type: none"> • One to three months in nine stations, • More than three to nine months in 10 stations • More than 9 to 20 months in 4 stations </div>	<div>temporarily discontinued due to some labour issues which are since been sorted out and rag picking activities are going on at Puri. It has been confirmed that segregation of garbage & records are maintained at selected units (PUI, BBS, CTC, VSKP, VZM & Chg depot BBS, PUI).</div> <div> NR Out of the 37 stations and 18 coaching identified by Audit where assessment of waste generated is not done at all. 7 stations (New Delhi, Raebareilly, Barabanki, Panipat, Rohtak, Shri Mata Vaishno Devi Katra and Jalandhar Cantt.) and 3 coaching depots (CD/HNZM, CD/DEE, CD/ASR) belong to NR. Of the 60 stations and 22 coaching depots identified by Audit where segregation of waste is not done. 8 stations (New Delhi, Raebareilly, Barabanki, Varanasi, Panipat, Rohtak, Shri Mata Vaishno Devi Katra and Jalandhar Cantt.) and 3 coaching depots (CD/HNZM, CD/DEE, CD/ASR) belongs to NR. Delhi Division has awarded an innovative contract for Waste Management and Resource Recovery at New Delhi, Hazrat Nizamuddin, Delhi, Delhi Sarai Rohilla and 26 other Railway stations of Delhi area. This contract marks a PARADIGM SHIFT as conventionally an expenditure contract has been converted into a revenue contract fetching Non-fare Revenue </div>	
--	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--

	<p>MoR stated (May 2022) that quantity of garbage is recorded properly and is mentioned in cubic feet dimension as disposal is done by trolleys of specific volumes in cubic feet. Ministry further added that the contractor quantity of waste is also assessed by contractor before transporting waste to municipality/local body for disposal. The reply is generic and not specific to audit comment as no such arrangements were found on record while auditing units mentioned in Table 2.2.</p>	<p>(NFR) of Rs. 50 lakh for 5 years (beginning 2021). Under this contract, the firm M/s Rekart Innovations Pvt. Ltd., Gurugram segregates station waste into Wet and Dry waste. It also ensures treatment of Wet waste. It has installed mechanized Material Recovery Facility (MRF) at nominated space at New Delhi Railway area to recover and recycle Dry waste. The firm is also creating awareness about segregation of waste for behavioral change among passengers, vendors etc. Prior to the current contract for waste management, four stations in Delhi Division, viz. New Delhi, Old Delhi, Sarai Rohilla and Hazrat Nizamuddin had been undertaking waste management through M/s Chintan, an environmental NGO. The NGO had been segregating waste and recycling plastic waste. Segregation of waste is being facilitated by providing separate dustbins for wet and dry waste at all stations. For systematizing waste management, Northern Railway has, in partnership with Government of Uttar Pradesh (GoUP) and German Development Cooperation has launched an initiative to employ the principles of circular economy to enable sustainable waste management at railway stations and in railway colonies in the city of Varanasi. This initiative aims at creating model zero-waste railway station and zero-waste railway colony in the city of Varanasi. The initiative in Varanasi aims at creating</p>	
--	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--

		<p>model zero-waste railway station and zero- waste railway colony in the city of Varanasi. Waste audit has been done at Varanasi Cant railway station in November 2021 by LAKSHYA foundation and in February 2022 by Massive Earth Foundation. It was found that 2.3 tonne of waste per day is getting generated. LoA for construction of MRF Shed has been issued to M/s Goyal Construction, Ghaziabad on 26.09.2022. A tender is planned to be floated shortly for selection of MRF Operator. Based on the successful implementation of the project at BSB station, the model shall be proliferated at other suitable locations.</p> <p>Development of training modules on various aspects of waste management and circular economy for capacity-building of different levels of railway functionaries is in progress. A pilot training module has been prepared and training held on 21.06.2022 and 22.06.2022 for around 100 IR officials to obtain their feedback. Revised module is being prepared based on the feedback received.</p> <p>At CD/ASR and CD/HNZM, segregation and disposal of waste generated in the depot is done by running cleaning contracts. At CD/DEE, segregation and disposal of waste clauses are planned to be incorporated in the cleaning contract.</p> <p>Rag picking contracts are generally awarded along with mechanized cleaning contracts in all the stations selected for</p>	
--	--	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--

		<p>audit. Sometimes there are short periods of discontinuity between expiry of one contract and awarding of the other; this period is generally managed by concerned officials through cash imprest.</p> <p>Instructions were issued to all concerned to ensure that required action is taken regarding assessment of quantity of waste generated as well as segregation of waste.</p> <p>NCR:</p> <p>PRAYAGRAJ DIVISION:- Quantity of waste generated has been assessed for PRYJ division where approx. 4620 kg/day is generated. For segregation of Bio-degradable & non-biodegradable waste 07 nos. of Master Bins (cap-4500 ltrs) have been installed at ALJN-01,TDL-01, ETW-01, FTP-01,PCOI-01, MKP-01 and MZP-01 where segregation & disposal of garbage is done in eco-friendly manner. At coaching depot/Prayagraj, segregation is being done in blue and green colour dustbin and being disposed off by the contractor on daily basis. Also, in all Railway Stations in cleaning contracts provision for garbage disposal was made against waste generation.</p> <p>AGRA DIVISION:- Station cleaning is being dealt by commercial department in Agra division. Quantity of waste generated has been assessed at AGC and AF station and records for the same is being maintained/monitored through currently running comprehensive</p>	
--	--	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--

		<p>mechanized cleaning contract including proper segregation and disposal of solid waste as per norms. Additionally 02 biogas plant (150 kg & 50 Kg capacity) at Running Room/AGC, 1 biogas plant (100 Kg capacity) at Agra Cantt station& 1 biogas plant (100 Kg capacity) at Agra Fort station have been provided for disposal of biodegradable waste.</p> <p>JHANSI DIVISION:- Cleaning contracts are available at JHANSI, GWL, BNDA & MORENA stations including proper segregation and disposal of solid waste as per norms. Additionally 02 biogas plant at Running Room/JHANSI station have been Planned for disposal of biodegradable waste.</p> <p>NER: Garbage disposal is included in station cleaning contracts of Stations under EnHM in NER. Quantity of garbage is recorded properly and is mentioned in cubic feet dimensions as disposal is done by trolley of specific volumes in cubic feet. Quantity of waste is also assessed by the contractor before transporting this waste to municipality/local body for disposal.</p> <p>NFR: Detailed elements of waste management were circulated to all divisions by HQ covering all the 26 NGT nominated stations of divisions for day-to-day monitoring. Since mid of 2019 onwards,</p>	
--	--	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--

		<p>the generation of waste of all the 26 nominated station have been assessed and provision of twin bin system has been introduced to segregate dry and wet waste collection and disposing the wet waste through bio-digester and dry waste to the municipality. With regard to disposal of wet waste, 14 bio digesters (Katihar, New lalpaiguri, New Alipurdwar, New Coach Behar, Alipurdwar, Rangia, Guwahati, Dimapur, Silchar, Dibrugarh, Barpeta Road, Lumding, Kokrajhar & New Bongaigaon) have already been commissioned and two more bio digesters at Dhupguri and Kamakhya are in the final phase of installation. As far as dry waste is concerned, already three incinerators have been installed at New Bongaigaon, Kamakhya & Dibrugarh work shop, and are working and facility has also been planned in two more places at Alipurdwar & New Coach Behar to tackle dry waste. At coaching depot, Dibrugarh, necessary instructions have been issued to segregate biodegradable and nonbiodegradable waste. For disposing of generated waste of Rangia division at stations and workplaces, assessment has been made and the disposal is being done by engaging outside agency. In Alipurdwar division, segregation of waste and transportation of the same through contract is under process. Mechanized Cleaning Contract is in operation at Guwahati and all other major coaching depots. During COVID-</p>	
--	--	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--

		<p>19 pandemic period, due to curtailment in frequency of train services, cleaning contracts were modified to suit the requirement.</p> <p>NWR: Now assessment of quantity of waste generation is being assessed at BKN, LGH and Coaching depot BKN. Quantity of waste is being regularly assessed since 2019-20. For segregation of biodegradable and Non-biodegradable waste color code (Blue/Green) dustbins have been provided at these stations and coaching depot BKN and JU. Rag picking activity is being carried out at JU Station as a part of the cleaning contract, whereas at GADJ station such work was discontinued due to non-operation of trains during pandemic. At present the station cleanliness work is managed through cash imprest in which rag picking is also done as and when required.</p> <p>SR: The quantum of garbage generated at stations have been assessed realistically duly conducting waste Audit at identified Stations and adequate collection, segregation, and disposal facilities along with necessary infrastructure is being planned based on the assessment. Rag Picking contract for Railway Station,</p>	
--	--	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--

		<p>approaches to Station and Track within 50 meters from the edge of farthest platform is available as an integral part of the cleaning contract. For Coimbatore (CBE) Railway Station Rag picking contract is included in Station cleaning contract and is valid till 30/11/2024.</p> <p>The status is being monitored in the periodical review meeting conducted for the assessing the compliance to Orders of Hon'ble NGT for 72 identified Railway Stations.</p> <p>SCR:</p> <p>CD/BZA: The quantity of the waste generated is being recorded, for the month of Aug 2022, approximately 100 kg of waste is being generated.</p> <p>CD/SC: The quantity of the waste generated is being recorded, for the month of Aug 2022, approximately 400 kg of waste is being generated.</p> <p>BVRM: Segregation of biodegradable and non-biodegradable waste is doing regularly from 01.08.2021. CD/BZA: BZA depot has out sourced its cleaning activities, in which garbage collection, segregation and disposal is a part of contract. The amount of garbage collected is recorded (Approx 100 kg per day) and segregated waste in terms of Bio degradable and Non-Bio degradable is dropped at nominated dumping yard by the contractor.</p> <p>NLR: Cleaning contract at NLR station is</p>	
--	--	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--

		<p>in operation from 20.02.2019 for a period of 4 years.</p> <p>BVRM: Cleaning contract at NLR station is in operation from 18.12.2019 for a period of 4 years contract. In either of the above contacts rag picking activity is included in the scope of work</p> <p>SER: Assessment of quantity of garbage has been done at KGP, SHM, SRC based on average garbage generated from the coaches as well as from the station area, platform & circulating area. In Digha, on an average 75 kg/day of garbage is generated. Separate dustbin has been installed in station premises for proper segregation of bio degradable, non biodegradable & domestic hazardous waste. At HTE assessment of the quantum of waste generated is been incorporated in new contract. Rag picking is incorporated in the contract for station and platform cleaning.</p> <p>SECR: MoU has been signed with Municipal Corporations. Assessment of waste generated is being done in all coaching depots which includes BSP, DURG, and Gondia. Segregation of waste into biodegradable and non- biodegradable waste is done in all coaching depots (BSP, DURG, Gondia) and at terminating station of Raigarh, Korba and Ambikapur.</p>	
--	--	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--

		<p>SWR:</p> <p>Assessment was done at Yelahanka station, Approx 40 kg of total waste generated per day in which 25 kg (biodegradable) and 15 kg (non biodegradable) Assessment is being done at Bangalore Depot. Assessment of the quantity of waste generated had been done at all 12 NGT stations of Mysore (MYS) division. Further assessment at regular time intervals is being carried at MYS station where most of the waste is generated. Assessment of the quantity of waste generated has been done. 24 verifiable indicators for monitoring of waste management have been implemented at UBL station.</p> <p>Both Biodegradable & Non Biodegradable waste is being segregated at the source and are being transported to authorize collection / dumping locations allocated by municipal authorities. Both Biodegradable & non Biodegradable waste is being disposed to municipal authorized location. Segregation of Biodegradable and non biodegradable waste and wet waste processing by way of composting is being carried out at 5 out of 12 nominated stations. At other stations both Biodegradable & non Biodegradable waste is being disposed to municipal authorized location.</p> <p>WR:</p>	
--	--	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--

		<p>Stations (Vadodara, Bharuch): Assessment of quantity of waste generated is being ensured. Coaching Depots (BDTS, Ahmedabad, and Indore): Negligible Solid Waste is generated in Coaching Depots. However, it is being properly assessed, managed and disposed off. Segregation as bio-degradable/non bio-degradable: Valsad, Dahod, Mumbai Central, Bilimora-Assessment of waste / garbage and maintaining data of waste / garbage generation has been difficult especially during the last 2 years due to Covid19 pandemic and also reduced deployment of labour as per Board's guidelines for cost cutting in cleanliness expenditure.</p> <p>Rag picking activity is part of the Station cleaning contract. However, the assessment of waste/garbage for biodegradable, non-biodegradable & plastic waste is being done & also data is being maintained. At Vadodara Station segregation of bio-degradable/non bio-degradable is being done since 2016. At Bharuch Station segregation is being done regularly since 2019-20. Negligible Solid Waste is generated in Coaching Depots. The continuity of rag-picking contracts is being ensured.</p> <p>WCR: Dustbins have been provided with stickers for Dry & Wet waste separately at nominated stations. At present,</p>	
--	--	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--

		<p>segregations at station started at source and segregated waste is sent to nominated trenching ground of Municipal Corporation. Transportation of waste is the part of cleaning contract. Assessment is being done at major stations. Segregation as bio-degradable/non-bio-degradable waste has been started at major stations. Rag picking is the part of cleaning contract at all nominated stations.</p>	
<p>2.4 Regulatory requirements compliance at stations</p>	<p>The National Green Tribunal (NGT), New Delhi directed (26 March 2019) Ministry of Railways to prepare & implement an Action Plan with 24 identified verifiable indicators¹⁵ (mentioned in Annexure 2.3) for proper monitoring of waste management at 36 stations (5 <i>per cent</i> of 720 major stations) and periodical review of progress made in its implementation. This Plan was subsequently to be replicated in phases for all other major stations.</p> <p>Railway Board, in compliance with NGT's order, directed (17 April 2019) all Zonal Railways to submit Action Taken Report by 25th of every month (commencing from April, 2019) on implementation of the Action Plan at 37 identified stations¹⁶ and also on preparation of Action Plan for balance (out of 720) major stations. This was again reiterated, with exhaustive list of verifiable indicators; vide</p>	<p>Zonal Railways is implementing action plan with 24 verifiable indicators for all NGT identified major 720 station, and zonal railways submit progress periodically to Railway Board.</p> <p>In compliance to Hon'ble NGT's order Consent to operate (CTO) applied for all 720 major stations out of which 720 major stations have achieved CFO from concerned SPCB. At present 624 stations possess CTO and for remaining 96 it is under process for re-certification.</p> <p>CTE requirement is not applicable as stations have been established long back and are already operational, however as per stipulation of concerned SPCB some stations have also obtained Consent to Establish (CTE) alongwith CTO.</p>	<p>1.The details of stations who don't have valid/expired CFO and are still operating post expiry of CFO permissions may be furnished. The reasons and measures taken to rectify the same may also be furnished.</p> <p>2.The reply is silent on obtaining Authorization by the stations from SPCB. The same may please be furnished.</p> <p>3. MoR's contention regarding requirement of CTE is not acceptable as Sections 21 of the Air Act 1981 and Sections 25 and 26 of Water Act 1974 stipulate that each industry started functioning prior to the commencement of the Acts must have to obtain 'Consent to Establish' within three months of the commencement of the Acts.</p> <p>Hence, the details of no of stations etc. which don't have valid CTE (Consent to Establish and/or CTO may be</p>

	<p>Railway Board's letter dated 13 May 2019.</p> <p>NGT further directed (04 December 2019) Central Pollution Control Board (CPCB) to evaluate the performance of major Railway stations both in terms of implementation of Action Plans and compliance to the provisions of the Water Act, Air Act and Environmental Protection Act and Rules framed thereunder. CPCB, also directed (2 June 2020) that all the Zones should take steps to reduce the waste water generation as also to identify quality of sewage and non-sewage waste water separately and plan waste water recycling plants accordingly.</p> <p>The NGT also directed for obtaining requisite authorisations in respect of remaining major Railway stations (out of total 720) within three months from 18 August 2020. Subsequently, Railway Board, vide their letter dated 1 September 2020 directed zonal railways to ensure compliance with the NGT's orders within the specified time limit.</p> <p>Audit reviewed the records of the selected 109 stations to assess the compliance with the NGT's order by the Ministry. Following points emerged from the review:-</p> <ol style="list-style-type: none"> i. Some of stations selected were functioning without CTE/CFOs in violation to the NGT's orders indicating the lack of 		<p>furnished to audit.</p> <p>4. It may be clarified whether the Hon'ble NGT's order have been fully complied in all the zones of IR. If not, then details of zones, divisions, stations etc who have not complied with the order along with a timeline for implementing action plan with 24 verifiable indicators in all 720 major stations identified by the NGT may please be furnished to audit.</p>
--	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

	<p>monitoring at appropriate levels.</p> <p>ii. As of 31 July 2021, 59 stations¹⁷ had not even applied to the concerned SPCBs for obtaining CTEs.</p> <p>iii. In respect of 11 stations¹⁸, though CTE was applied for but the same was awaited from respective SPCB as of 31 July 2021¹⁹.</p> <p>iv. CFO was not obtained in respect of 46²⁰ stations till 31 July 2021 and</p> <p>v. In respect of 34 stations, CFO was obtained directly on the advice of SPCB without having applied for CTE.</p> <p>Delays in obtaining CTE was mainly attributed to specified equipment not provided or attending to the various requirements of SPCBs and rejection of applications by SPCBs on technical grounds.</p> <p>(Annexure-2.4)</p> <p>MoR stated (May 2022) that 577 stations out of 720 have obtained CFO in compliance to NGT's order. Reply is not specific to Audit comment. Details of the stations where compliance of NGT's order is pending have, however, not been given in the reply.</p> <hr/> <p>¹⁵ <i>Verifiable indicators included water and</i></p>		
--	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--	--

	<p><i>energy audit, ISO certification, provision of dustbin, rag picking contracts, provision of poster, installation of ETP/STP/WRPs, provision of Waste Composting Plant, Material Recovery Facilities, use of CCTV cameras for monitoring cleanliness, co-ordination with Urban Local Bodies in order to prevent unauthorized dumping of waste</i></p> <p>¹⁶ <i>36 stations selected as per directions of NGT and 01 additional station identified by Railway Authorities i.e. Shri Mata Vaishno Devi Katra</i></p> <p>¹⁷ <i>Since applied in August 2021 for 3 station i.e. Metro Rail Kolkata-Rabindra Sadan, Esplanade, Dum Dum</i></p> <p>¹⁸ <i>Since obtained in September 2021 at 01 station i.e. WCR-Sawai Madhopur</i></p> <p>¹⁹ <i>This was required to have been completed as per the cited NGT order by 31 March 2021 and this position in audit was verified and updated as of 31 July 2021.</i></p> <p>²⁰ <i>Since obtained in August 2021 at 02 stations i.e. SER-Shalimar and Kharagpur</i></p>		
<p>2.5</p> <p>Action Plan involving verifiable indicators at 37 identified major stations as per NGT's</p>	<p>Records regarding implementation of the Action Plan with 24 identified verifiable indicators at 37 identified stations were reviewed in all the Zones across IR and implementation in respect of most of the verifiable indicators, such as water and energy audit, ISO certification, provision of dustbin, rag-picking contracts, provision of poster etc was found satisfactory. However, implementation of the significant indicators,</p>	<p>ECR has informed that Water Recycling Plant (WRP) at Dhanbad has been installed on 07.03.2022 and Waste Composting Plant is already installed at Dhanbad since 05.10.2019 and 900 sqm area has already been earmarked at Dhanbad for Material Recovery Facility.</p> <p>NER has informed that at present WRP sanctioned for LNJ station & for Manduadih (BSBS) STP proposed 620 KLD. Manual composter 200Kg available</p>	<p>1. It may be clarified whether periodical reports to Railway Board are being submitted by all ZR on a regularly and timely basis. If not, then details of the defaulting divisions, zones etc. along with action taken by RB to resolve the issue may be furnished to audit.</p> <p>2. Present status of the composting bins at 13 stations at Southern Railway may be furnished.</p>

order	such as installation of ETP/STP/WRPs, provision of Waste Composting Plant, Material Recovery Facilities, use of CCTV cameras for monitoring cleanliness, co-ordination with Urban Local Bodies was not complete as brought out in Table 2.3 below:-	& 150Kg automatic bio-composter plant sanctioned and its tender under process at BSBS station.	It has been observed by audit that a WRP (not in working condition) and not ETP is available in Coaching Depot /BBQ.									
	Table 2.3 –Compliance with NGT orders for implementing 24 verifiable indicators	SR has informed that ETP at Coaching Depot/BBQ (Capacity:1000 KLD) and is under provision Coaching Depot/TVC (Capacity:140KLD) is already available for recycling waste water. Provision of composting bins is under progress at 13 stations (MAQ, CAN, CLT, TIR, MAJN, KZE,KGQ, PAY,TLY,BDJ,QLD, KTU AND OTP) of palakkad division.	3. Present status of The process of setting up of Composting Plant & Material Recovery facilities at SVDK may be furnished to audit.									
	<table><tr><th>S. No</th><th>Activit y</th><th>Status of implementation/complia nce (as of 31st March 2020)</th></tr><tr><td>1</td><td>ETP/ST P/WRP s</td><td>Not planned in five stations²¹. In other five stations²² though planned but the same were not yet installed</td></tr><tr><td>2</td><td>Waste Compos t Plant and Material Recover y Compos t Plant and Material Recover</td><td>Not provided at 14 stations²³ and at 16 stations²⁴respectively</td></tr></table>	S. No	Activit y	Status of implementation/complia nce (as of 31 st March 2020)	1	ETP/ST P/WRP s	Not planned in five stations ²¹ . In other five stations ²² though planned but the same were not yet installed	2	Waste Compos t Plant and Material Recover y Compos t Plant and Material Recover	Not provided at 14 stations ²³ and at 16 stations ²⁴ respectively	ECoR has informed that regarding VZM station, the work has been completed and STP commissioned on 24.12.2021. Further regarding Encroachment and illegal dumping, some incidents are taking place intermittently due to proximity with slum area along the railway establishments and railway administration take corrective /preventive/punitive measures from time to time to clear it in consultation & cooperation of local bodies. At VZM station, garbage bins have been installed at the collection point for collection and disposal of garbage. As on date, there is no illegal dumping at this location.	4. It may please be clarified whether the Action Plan was completely executed in all Zonal Railways of IR. If not, then the details of ZRs , reasons for the non-execution of the plan and a time bound action plan for executing the same may be furnished to audit.
	S. No	Activit y	Status of implementation/complia nce (as of 31 st March 2020)									
1	ETP/ST P/WRP s	Not planned in five stations ²¹ . In other five stations ²² though planned but the same were not yet installed										
2	Waste Compos t Plant and Material Recover y Compos t Plant and Material Recover	Not provided at 14 stations ²³ and at 16 stations ²⁴ respectively										
		ER has informed that Implementation of 24 Verifiable Indicators for proper monitoring of waste management at 43										

		y Facilitie s		NGT nominated stations is being monitored. Repeated eviction notice issued for removal of unauthorized encroachment at SDAH, assistance from local administration and police have been regularly sought. Boundary wall is available at HWH station.	
	3	Usage of CCTV cameras for monitoring Cleanliness activity.	Primarily used for security purpose as well for monitoring cleanliness.		
	4	ISO certification, Water Audit and Energy Audit	Completed in all the 37 identified stations		
	5	Encroachment of railway land, illegal dumping in railway premises and	<ul style="list-style-type: none"> Encroachment found on five²⁵ stations. Illegal dumping on railway premises was noticed in four stations²⁶. Boundary wall not constructed at seven stations²⁷. 	<p>NCR has submitted following:</p> <p>PRAYAGRAJ DIVISION :- (i) Waste water discharge from PRYJ Railway Station is being treated by STP/ETP of Nagar Nigam and as per MOU between ministry of Railway and ministry of water resource river development and Ganga Rejuvenation conservation. On 03.12.2015, Prayagraj Railway Station is one of the stations which are identified for the use of non-potable water released after treatment from sewerage/effluent treatments located in Ganga and Yamuna River zones for railway purpose, so there is no need to install STP/ETP at PRYJ railway Stations.</p> <p>(ii) Composting plant not required at stations as lesser quantum of wet waste is available.</p> <p>(iii) CCTV facility is provided at PRYJ railway station for monitoring of cleaning activities.</p> <p>AGRA DIVISION:- (i) 02 biogas plant (150 kg & 50 Kg capacity) at Running Room/AGC and 1 biogas plant (100 Kg capacity) at Agra Cantt station have been provided. Material recovery facility is not</p>	

	bound ary wall to preven t unauth orized dumpi ng on railway land		required at AGC station as Station cleaning is being done through comprehensive mechanized cleaning contract in which condition of proper segregation and disposal of solid waste as per norms has been included. (ii) 53 No. CCTV cameras at AGC station have been provided for security as well as monitoring of cleanliness activities. (iii) Illegal dumping has been removed from station premises at Agra Cantt Railway station. C. Boundary wall has been provided to prevent unauthorized dumping at AGC station. (vi) Compliance on submission of periodical report is being done regularly at Agra division.	
6	Periodi- cal Reports	Compliance not done in respect of submission of Periodical reports at five stations ²⁸ .	JHANSI DIVISION:- 1. Two 50 KLD STP has been installed near JHS station & one 0.5 MLD WRP at GWL. 2. 02 biogas plant at Running Room JHANSI have been Planned. 3. CCTV cameras at JHS and main stations have been provided for security as well as monitoring of cleanliness activities. 4. No comment please. 5. Not pertains to JHS division 6. Noted for compliance.	
<p>Implementation of Action Plan was satisfactory in respect of some stations like Pune (CR), Sealdah (ER), Rajendra Nagar Terminal (ECR), Visakhapatnam (ECoR), New Delhi (NR), Katihar (NFR), Jaipur & Jodhpur (NWR), Secunderabad, Kacheguda & Vijaywada (SCR), Ranchi & Digha (SER), Bilaspur (SECR), Hubballi & Mysuru (SWR), Jabalpur & Bhopal (WCR) and Vadodara (WR), where 20 or more out of 24 verifiable indicators were implemented. However, it was observed that implementation of the 24 Verifiable Indicators were not entirely accomplished even in respect of a single station out of the 37 stations as of 31st March 2020.</p> <p>WR has informed that at Vadodara: ETP/STP/WRP have not been installed due to non-availability of space. However, waste water from the station is collected & connected to Municipality sewage which has a centralized effluent treatment plant and for Mumbai Central Station, STP</p>				

	<p>MoR in reply stated (May 2022) that works for setting up of ETPs/STPs/WRPs which require huge infrastructure inputs have been sanctioned for the year 2022-23. MoR further added that composting plant is not required at stations with lesser quantum of wet waste. Reply of the MoR is not specific to the stations included in the audit observation above. Further, the fact that implementation of 24 Verifiable Indicators was not entirely accomplished even in respect of a single station out of 37 stations has not been contested by MoR.</p> <hr/> <p>²¹ <i>ECR-Dhanbad, NER- Lucknow Jn. & Manduadih, SR- MGR Chennai Central & Thiruvananthapuram Central</i> ²² <i>ECoR- Vizianagaram, ER- Howrah, NCR- Jhansi, WR- Mumbai Central & Vadodara,</i> ²³ <i>CR- Nasik Road, NR- Varanasi & Shri Mata Vaishno Devi Katra, NCR-Jhansi, Prayagraj & Agra Cant, NWR- Ajmer, SR- Thiruvananthapuram Central MGR Chennai Central, Tiruchchirappalli Jn., SCR- Secunderabad & Vijaywada, SECR – Bilaspur WCR- Jabalpur</i> ²⁴ <i>CR- Nasik Road, ECR- Dhanbad ER- Howrah & Sealdah, NCR- Jhansi, Agra Cant & Prayagraj, NEFR- Guwahati & Katihar, NER-Manduadih, NWR- Ajmer, SECR- Bilaspur & Raipur, SER- Digha,</i></p>	<p>with capacity 100 KLD installed on 29.12.21.</p> <p>NR has informed that composting plant and Material Recovery facilities are under progress at Varanasi Cantt railway station in the Zero-Waste project in collaboration with German Development Cooperation and efforts are being made to set up these facilities at SVDK. Regarding NDLS station, sleeper fencing is being done after removal of encroachment and fencing of 500 m has already been completed.</p> <p>NWR has informed that composting pit and Material Recovery facilities have been provided at Ajmer station. Boundary wall constructed at Ajmer station.</p> <p>SECR has informed that MOU with Municipal Corporations at Bilaspur and Raipur Raigarh, Korba, Champa, Raipur have been implemented which collects and make appropriate disposal as per SWM -2016. Encroachment/illegal dumping incidents are taking place intermittently at Raipur and Bhilai Power House stations due to their proximity with slum areas. Time to time Railway</p>	
--	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--

	<p><i>SWR- Hubballi, WCR- Jabalpur</i> ²⁵ <i>ER-Sealdah, SECR-Raipur, SWR- Hubballi, WCR-Jabalpur & Bhopal</i> ²⁶ <i>ECoR-Vizianagram, NCR-Agra cant., SER-Ranchi, SECR-Raipur</i> ²⁷ <i>ER-Howrah, NR- Delhi, Firozpur, NCR-Agra cantt, NWR-Ajmer, SECR-Raipur, WCR-Bhopal</i> ²⁸ <i>ER- Howrah & Sealdah, NCR- Jhansi, Prayagraj & Agra Cant</i></p>	<p>administration takes corrective/preventive measures with the help of local bodies.</p> <p>WCR has informed that MOU has been signed with Local Municipal bodies for waste disposal generated at JBP & BPL station. Material recovery facility (MRF) - as waste generated at JBP & BPL is less than 25 T/day hence not applicable. Illegal dumping in railway premises at JBP-05 & at BPL-01. Construction of boundary wall to prevent dumping on railway land needed at JBP-05 locations & at BPL-01 location.</p> <p>NFR has informed that on assessment of waste generation at Guwahati, 350 pairs of dustbins have been provided and the disposal of dry and wet waste generation is being carried out in regular intervals on daily basis and there is hardly any accumulation of solid waste. Since the waste is being segregated by collecting in separate bins at generation points of stations, no separate Material Recovery Facility at stations is provided at the stage. The number of dustbins provided at Katihar is 96. Segregated waste collected from Pantry Cars and Trains with OBHS are being disposed through cleaning contract on daily basis and transported to Municipal Areas as per the terms of contract, the need for MRF at station does not arise, considering the quantum of waste generated.</p>	
--	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--

		<p>SER has informed that Waste compost plant & MRF are not required for Digha, as Digha is not the bulk waste generator i.e. waste generation is below 100kg/day and generated waste are being handed over to Municipal Authority (DSDA) as per contract. As of now there is no illegal dumping at RNC station.</p> <p>NCR has submitted that at some railway stations wet waste is not of substantial quantity hence composting Plant is not required. Material recovery facility is not required at some stations as station cleaning is being done through comprehensive mechanized cleaning contract in which condition of proper segregation and disposal of solid waste as per norms has been included.</p> <p>Installation of ETP/STP/WRP require huge infrastructure inputs. In some stations work for installation have been sanctioned/under construction.</p>	
<p>2.6 Action Plan involving verifiable indicators at other than 37 stations</p>	<p>Status of implementation of the action plan in respect of the 24 identified verifiable indicators in the remaining major stations (balance out of 720 major station) was assessed in 65 stations (<i>Annexure 2.5</i>) selected across all the zones over IR which revealed the following:-</p>	<p>ETP/STP/WRP are available at 162 out of 720 major station.</p> <p>Material Recovery Facilities are available at 173 out of 720 major stations.</p> <p>CCTV cameras are primarily used for security purpose as well as for monitoring of cleanliness. At 574 stations out of 720</p>	<p>1. Reply of MoR is not accepted. Reply is general in nature and not substantiated with the details of stations where the identified verifiable indicators were provided/made available and action plan/timeline for its provision in the remaining stations.</p> <p>2. It was observed that periodical</p>

<p>(balance of 720 stations)</p>	<ul style="list-style-type: none"> i. ETPs/STPs/WRP were not installed in 41 stations, ii. Waste Composting Plants and Material Recovery Facilities were not provided in 43 and 46 stations respectively. iii. CCTV cameras were not used for monitoring cleanliness activities at 28 stations. iv. Non co-ordination with Urban Local Bodies /Local Bodies (ULB/LBs) in 28 stations and no toilets in the circulating area in 30 stations. v. Water Audit not conducted at seven stations²⁹ and Energy Audit not conducted at 11 stations³⁰. vi. Periodical Reports were submitted by all the stations except by 10 stations³¹. <p>This indicates Railway Administration was not serious enough in implementation of the much-emphasized 24 verifiable indicators. NGT's orders were, thus, violated.</p> <p>MoR in their reply stated (May 2022) to have complied the implementation of 24 verifiable indicators. Reply is not acceptable as audit comment was regarding stations not complying with the specific requirement. Reply of the Ministry is silent on this aspect.</p>	<p>major stations, CCTV cameras have been provided.</p> <p>Coordination with ULB to prevent U/A dumping, prevent open defecation & encroachment are present at all 720 major stations.</p> <p>Water audit has been completed at 670 stations out of 720 major stations.</p> <p>Energy audit has been completed at 684 stations out of 720 major stations.</p> <p>Periodical Report is being submitted on regular basis.</p> <p>Implementation of these 24 verifiable indicators is going on at the major remaining stations and is being continuously chased by Railway Board.</p>	<p>reports are not being submitted in many stations etc.</p> <p>3. Details of any time bound action plan has been formulated by MoR in respect of the achievement of the action plan.</p>
-----------------------------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

	<p>²⁹ <i>CR- Wadi, ECoR- Cuttack, NER – Kathgodam, Haldwani, Bareilly City, NWR- Gandhi Nagar Jaipur, WR- Bharuch</i></p> <p>³⁰ <i>CR- Wadi, EcoR- Cuttack, NER- Kathgodam, Haldwani& Bareilly City, NEFR- New Bongaigaon & New Jalpaigudi, WR- Bandra Terminus, Metro Rail - Dum Dum, Esplanade & Rabindra Sadan</i></p> <p>³¹ <i>NR- Barabanki, Panipat, Rae Bareilly& Rohtak, NCR- Prayagraj Chheoki, WCR- Katni & Pipariya, Metro Rail- Dum Dum, Esplanade & Rabindra Sadan</i></p>		
--	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--	--

<p>2.7 Progress on actionable points under Swachh Bharat Mission (SBM)</p>	<p>As a part of ‘<i>Swachh Bharat</i>’ mission, Railway Board formulated actionable Points for improvement of cleanliness in station premises and issued directives in July 2016 and September 2016. Zonal Railways were asked to circulate these points to all major A1 and A category stations so that the corrective/preventive actions wherever needed are taken and systems are set up for monitoring to improve the cleanliness standards. These Actionable Points contained, <i>inter-alia</i>,</p> <p>(i) Picking up of garbage from the point of arising itself using ergonomic garbage collector like dustpan with handle and putting inside the garbage bin thereby avoiding sweeping down the solid waste to drains.</p> <p>(ii) Monitoring of cleaning staff through CCTVs and earmarking the specific beats for cleaning staff.</p> <p>(iii) Cleaning staff earmarked to maintain the identified beats free of garbage.</p> <p>(iv) Provision of different coloured dustbins with black polythene bag for non-biodegradable waste (dry waste) and green coloured for biodegradable waste (wet waste) within 10 meters in all the areas of passenger movement.</p> <p>(v) Provision of dustbins and proper</p>	<p>Noted for compliance please. However, regular drives are launched from time to time including an 15 days intensive cleaning and awareness campaign “Swachhata Pakhwada” is launched across Indian Railways every year to maintain cleanliness & hygiene.</p>	<p>No further comments, as MoR has noted the audit point for compliance.</p>
-----------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------

garbage disposal arrangement in vehicle parking area.

(vi) Foot over-bridges (FOBs) covered with wire mesh throughout the length to prevent falling of objects and garbage on to the track and sides

Progress on these important actionable points was examined in audit at the 109 selected stations and 30 coaching depots. The deficiencies noticed are indicated in Table 2.4 below.

Table 2.4 - Status of implementation on the actionable points on SBM

S. N o.	Actionable Point	Status of implementations
1	Provision of dustbins	(i) Different coloured signage dustbins with polythene liner bags inside were not provided in 12 stations and 15 coaching depots for collection of wet and dry waste. However, in case of 97 stations (89 <i>per cent</i>) different coloured dustbins were provided.

			<p>(ii) At 27 stations, dustbins provided were not placed within 10 meters from any location in all the area of passenger movement.</p> <p>(iii) Covered dustbins were not provided in waiting room and toilets at 17 stations.</p> <p>(iv) Provision of dustbins not found in vehicle parking area at 38 stations.</p>		
	2	Monitoring of cleaning staff	<p>(i) In 42 stations, the CCTVs camera at the platforms of stations was not used for monitoring availability of cleaning staff at their areas of work.</p> <p>(ii) Beats were not earmarked for the cleaning staff at 16 stations.</p>		
	3	Inclusion of cleanliness	<p>(i) Cleaning contracts in respect of 53 stations and 18 coaching depots did not have specific clause for segregation of waste.</p>		

	aspect in the cleaning contracts	(ii) At seven stations garbage was not picked up from the point of arising.
4	Covering FOBs with wired mesh	FOBs at 28 stations were not covered with wired mesh to prevent falling of garbage on overhead wires and track.

In continuous efforts towards monitoring the progress of stations on “*Swachh Rail, Swachh Bharat*” campaign, the Ministry of Railways engaged (2019) Quality Council of India for the survey for ranking of 720 stations. Result of progress on the aspects like “*No littering in sight*”, “*Dustbin in sight*” and “*Twin Dustbin in sight*” is indicated in Table below.

Table 2.4 A - Excerpts of the result of e-survey conducted by QCI for implementation of Action Plan for cleanliness at stations

(Figures in per cent)

Particulars	No littering in	Dustbin in sight	Twin bins in sight

		sig ht				
	Parking area	73.98	64.6	73.77		
	Main Entry	85.97	84.72	62.30		
	Ticket counter	92.22	78.75	67.02		
	Waiting area	94.03	84.18	61.17		
	FOB & Stairs	93.56	63.01	76.40		
	Open sitting area	90.93	87.76	72.68		
	Vendor area	91.68	96.13	65.60		
	It may be seen that despite clear directives given by Railway Board in 2016 for implementation of actionable points for cleanliness of station premises, many stations (out of 720) have not yet completed the implementation of action plan.					
2.8 Efforts made for execution of railway works through CSR initiative	For supplementing the Railway's efforts in keeping the railway stations clean, Railway Board, instructed ³² (February 2016) Zonal Railways to encourage the Corporates and PSUs for sponsoring the works at stations especially falling in their business/influence area to execute identified railway works under corporate social responsibility (CSR). These works included provision of dustbins, waste transport trollies, cleaning machines,				Noted please. All ZRs are being advised to take necessary efforts under CSR activities for plantations, installation of plastic bottle crushing machines, dustbins, toilets etc.	In addition to issuing instructions, a proper monitoring mechanism to oversee the progress made in creation of facilities through CSR initiatives needs to be devised by MoR for time bound implementation.

Sewage/effluent treatment plants, waste to compost, waste to energy plants etc. at stations. These provisions under CSR initiative were with an objective to promote participation of corporation and PSUs for execution of environmental sustainability works, cleanliness works, sanitization of stations and provision of certain passenger amenities.

EnHM wings of the Zonal Railway/ Division were to co-ordinate such sponsoring of CSR activity and an appropriate database of the facilities created through CSR initiative were to be maintained by the Railway Administration.

The measures under CSR initiative met very limited success. Facilities provided for waste management at stations through CSR initiatives were reviewed across all Zonal Railways and the outcome is brought out in Table 2.5 below:

-

Table 2.5 - Response under CSR initiative

S N o ·	Work/ Item provided	Num be rs	Division	Zone	Cost involved (in crore)
1	Dustbins	19 06	CSMT, Delhi, Agra, Mumbai Central,	CR, NR, NCR, WR, ECOR	0.86

				Vadodara & Waltair				
	2	Waste to compost plant	10	Sealdah, Bikaner, Secunderabad, Mumbai Central & Waltair	ER,NW R, SCR, WR, ECOR	0.75		
	3	Trolleys	10	Bilaspur	SECR	0.05		
	4	Waste to Energy Plant	1	Jaipur	NWR	0.91		
	³² letter No. 2015/EnHM/06/06 dated 03.02.2016							
2.9 Collection and Segregation	Procedure order for handling waste arising out of pantry cars and static catering units at stations and its disposal circulated vide RB's Commercial Circular No 55 of 2016 stipulated			Garbage is disposed in poly bags by the OBHS contractor staff and put in 02 type or 03 type dustbin and disposed off as per the provisions of the contract.			<i>MoR's reply is generic in nature. After verification of the facts verified by Zonal Audit offices, it was evident that adequate steps have not been taken till now for segregated and</i>	

<p>of waste generated by catering units and from trains covered under OBHS</p>	<p>provision in the license agreement with catering contractor for collection of waste in two colored bins³³. Guidelines circulated vide RB's Commercial Circular No.14 of 1999 and Commercial Circular no. 45 of 2011 contained instruction to have local Joint Procedure Orders (JPOs) in order to implement the procedure for collection of pantry Car waste at platforms. For on board cleaning and hygiene attention in running trains, Railways had adopted the On Board Housekeeping Services (OBHS) Scheme under which cleaning and disinfection of the coaches and toilets was to be ensured by engaging outsourced agencies. Guidelines circulated by Railway Board (17 February 2016), provided for ensuring collection of garbage/litter from the coaches in secured polybags/eco-friendly bags by the contractor.</p> <p>Review conducted in the 109 selected stations across all zonal railways revealed the following: -</p> <ol style="list-style-type: none"> Provision of collection of waste in two colored bins as stipulated in the license agreement with catering contractor were not incorporated in 39 stations leading to consequential non-segregated collection of waste. In respect of 58 stations contractors did not ensure collection of polybags containing 	<p>Waste segregation is not possible inside train at present however OBHS staff and pantry car staff are regularly counseled to put any waste (most waste being disposed by OBHS is dry waste) in dry waste bin and wet waste (most waste disposed by pantry car staff is wet waste) in wet waste bins.</p> <p>Collected waste from OBHS trains is dumped in nominated place at nominated Railway stations.</p>	<p><i>proper collection of waste from OBHS train, pantry cars & catering units. Local JPO in each Zonal Railway needs to be issued and contracts with catering vendors should incorporate clause for segregated collection of waste.</i></p>
---------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

	<p>garbage from OBHS trains.</p> <p>iii. Joint inspection conducted by Audit revealed that the segregated waste collected from the Pantry cars and OBHS trains was not unloaded in secured bags in 49 stations. In 42 of these 49 stations, waste collected from the Pantry cars or OBHStrain was not dumped in the separate assigned dustbins.</p> <p>iv. JPOs were not issued in respect of 70 stations for implementing the procedure for collection of waste from pantry cars.</p> <p>Non-compliance of the laid down procedures for collection and disposal of waste of catering units at stations and that from OBHS trains had adverse impact on cleanliness at these stations.</p> <p>³³ <i>Green for biodegradable waste/wet waste and black for non-biodegradable waste/dry waste in catering units</i></p>		
<p>2.10 Assessment and collection/segregation of Plastic Waste at Stations</p>	<p>Railway generates vast quantities of different types of waste- both solid and plastic waste. Public Account Committee (PAC) in its 83rd report (2008-09) stated that, the Ministry of Railways must not lose sight of environmental concern while making use of plastics and ensure adherence to applicable rules. Central Pollution Control Board (CPCB) sponsored a study through RITES regarding plastic waste generated at three railway stations (New Delhi,</p>	<p>CR: PBCM has been installed in 03 stations and planned to install the PBCM at 10 stations.</p> <p>NR: PBCMs were not functional during the audit. Instructions have been issued by NR to concerned Railway Divisions to take necessary action. 'Plastic only bins' have now been installed at CD/HNZM, CD/DEE, CD/BSB & CD/ASR to segregate plastic. Instructions have been issued to divisions to install plastic only</p>	<p>CR- Present status of PBCM in 10 stations may be furnished.</p> <p>NR- it was seen that Plastic only bins are still not installed at CDO/BSB (LKO Dn.). Present status may be furnished.</p>

	<p>Old Delhi and Hazrat Nizamuddin station). The report (December 2009) indicated that about 6758 Kg. of plastic waste was being generated by these stations per day and there was no system in place to segregate degradable and non-biodegradable wastes generated at these stations. In terms of the Plastic Waste Management Rules, 2016, Indian Railways was identified as ‘waste generator’³⁴.</p> <p>Railway Board issued following directives³⁵ (October 2016) to Zonal Railways:-</p> <ul style="list-style-type: none"> □ Minimize usage of plastic, □ Set up waste management system including collection, segregation and disposal of plastic waste in an appropriate manner. □ Ensure provision for disposal of such waste in an environment friendly manner in all cleaning contracts. <p>For better management of plastic waste, it is imperative upon railway authority to assess and take steps for separate collection and segregation of plastic waste at stations.</p> <p>Audit conducted at 109 stations and 30 coaching depots revealed that assessment of quantity of plastic waste generated at 71 stations and in 26 coaching depots was not done by Indian Railways. (<i>Annexure 2.6</i>).</p> <p>Railway Board directed³⁶ (August 2019) all</p>	<p>bins at all stations.</p> <p>NER: Single use plastic ban implemented, PBCMs are installed in all major stations through CSR & in near future through earning contract by Commercial department. At all 29NGT nominated stations Biodegradable & Non-Bio-degradable dustbins provided where NonBiodegradable dustbins are provided for Plastic waste. Triplet dust bins are also provided in major stations.</p> <p>NCR:</p> <p>PRAYAGRAJ DIVISION :- (i) 09 nos. PBCMs are installed at 06 nos. railway stations such as ALJN-02, TDL-01, ETW-01, PRYJ-02, CNB-02 and MZP-01. (ii) PBCM is functional at Prayagraj railway station. (iii) Dust bins are provided in pairs for dry and wet waste at PRYJ Railway station. (iv) Plastic waste comes under dry waste for that same dust bin is being used. (v) Noted for compliance.</p> <p>AGRA DIVISION:- i. PBCM at Agra Fort will be planned after availability of CSR funds. ii. ‘Plastic Only Bins’ will be arranged through CSR at AGC and AF Railway stations. iii. Segregation and disposal of plastic waste has been included in currently running comprehensive mechanized cleaning contract at Agra Cantt and Agra Fort Railway station. iv. Record related to end usages of the plastic waste generated from PBCMs is being maintained properly at</p>	<p>NCR-</p> <p>AGRA DIVISION: Timeline to install PBCM at Agra Fort may be furnished. Present status of Plastic Only Bins' at AGC and AF Railway stations may be furnished.</p> <p>NFR- It was observed that the Machine in NBQ Station was out of order. (b) Contract details of Coaching Depot, Dibrugarh with provision for collection and segregation of plastic waste, may be provided.</p>
--	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------


	<p>Zonal Railways to enforce detailed measures on Plastic Waste Management with effect from 02 October 2019 which mainly included the following:-</p> <ol style="list-style-type: none"> Strictly enforce ban on single use plastic material. Encourage all railway vendors to avoid use of plastic carry bags. Encourage staff to reduce, reuse and refuse plastic products and to use inexpensive reusable bags to reduce plastic footprint. IRCTC to implement return of plastic drinking water bottles as part of Extended Producer Responsibility. Provision of Plastic Bottle Crushing Machines (PBCMs). <p>Compliance to these Plastic Waste Management Rules 2016 as also the instructions of Railway Board were examined in Audit and based on the record provided it was observed that following measures were implemented to some extent: -</p> <ul style="list-style-type: none"> Planning and installation of Plastic Bottle Crushing Machines Provision of '<i>plastic only bins</i>' <p>Progress on the above measures is indicated below -</p>	<p>AGC and AF Railway stations.</p> <p>JHANSI DIVISION:- 1. Segregation and disposal of plastic waste has been included in currently running comprehensive mechanized cleaning contract at JHS, GWL, BNDA & MRA Railway stations.</p> <p>2. Record related to end usages of the plastic waste generated from PBCMs is being maintained properly at JHANSI station.</p> <p>NFR:</p> <p>The ban on single use plastic is implemented. Posters have been displayed on platforms at major NGT stations for awareness to the passengers. On every Environmental Day (June 5th) emphasis is being made for the staff to reduce, reuse products. and refuse plastic. In all the NGT stations, PBCMs are provided except 3 fewer footfall stations viz. Mariani, Dibrugarh Town & Dibrugarh, for which procurement is under process completed and supply expected shortly at NFR. Assessment of quantity of plastic waste generated at Coaching Depot, Dibrugarh will be done on priority and provision for collection and segregation of plastic waste will be incorporated in next contract with effect from 2023. Though Plastic only bins are not provided, PBCMs are provided. HJI is not a NGT nominated station. Based on assessment PBCMs are provided and in case of further necessity</p>	<p>NWR- The position in this regard was reviewed and it was found that Plastic Bottle Crushing Machines, although planned, were not installed at BKN and LGH stations of NWR. Further, PBCMs were not planned to be installed at RKB station.</p> <p>assessment of Plastic waste was not done at Coaching Depot JU and Coaching Depot BKN.</p>
--	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

	<p>i. Installation of PBCMs was planned at all the 37 major stations (included in 109 stations selected for Audit) in compliance to NGT orders. This was also one of the important verifiable indicators out of the 24 indicators (referred to in Para 2.5) initially applicable for 37 identified major stations. At 14 stations, the PBCM installed were less than what was planned. (Annexure 2.6) Out of the 109 stations selected for Audit, PBCMs were not even planned in 11³⁷ stations and in 14 stations³⁸ though these were planned but not even a single PBCM was installed as on 31 March 2020.</p> <p>ii. PBCMs installed at 15 stations³⁹ were not found functioning during the Joint inspection conducted with the Railway Officials. These included two stations (Hubballi & Digha) out of the 37 major NGT identified stations.</p> <p>iii. As regards provision of '<i>Plastic Only Bins</i>' as a measure of segregation of plastic waste, review in Audit revealed that in 90 stations and 25 coaching depots (Annexure 2.6) no such facility existed.</p> <p>iv. On the issue of steps taken to minimize the generation of plastic waste and</p>	<p>the installation will be stepped up. Plastic waste is disposed through contract as a dry waste.</p> <p>NWR: Biodegradable bags are used by railway vendors. The staff are instructed to carry reusable bags and refuse plastic bags. Plastic bottle crushing machines have been installed at important stations over NWR.</p> <p>Assessment of Plastic waste is carried out and record is being maintained at these stations and coaching depots. As per the norms of Ministry of Environment, forest and climate change, the manufacture, import, stocking, distribution, sale and use of single use plastic has been prohibited w.e.f.01.07.2022. Specific provision for collection and segregation of plastic waste will be incorporated in future contracts. The instructions have been issued in this regard. However, MOU for disposal of Municipal Solid waste at 23 stations have been executed and final disposal of waste is being done by Municipal bodies.</p> <p>SR: Single use plastic has been banned across S.Rly and campaigns are being organized for awareness against single use plastic. 64 Nos. of Plastic Bottle Crushing Machines were installed at 56 Railway Stations and one Plastic Bottle Crushing</p>	<p>SWR- Reply is general in nature. The names of Stations where "Plastic only bins" has been provided over SWR may be furnished.</p> <p>WCR- No remarks is furnished for non-use of 'Plastic only bins' at the pointed out stations of WCR and non-provision of PBCMs at Hoshangabad, Pipariya and Katni station.</p> <p>WR- Ministry of Railway's reply stating that the assessment of waste /</p>
--	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

	<p>segregation of the same at source, Audit observed that relevant clause was not incorporated in cleaning contracts in respect of 84 stations and 26 coaching depots.</p> <p>v. Record related to end usages of the plastic waste generated from PBCMs that were operational was not made available to Audit.</p> <p>MoR stated that 639 PBCMs have been installed at 441 out of 720 major stations. As regards provision of '<i>plastic only bins</i>' MoR has assured better management of plastic waste.</p> <p>Reply of the Ministry is not acceptable as it is generic in nature and status of planning/installation of PBCMs on the stations commented has not been brought out inreply.</p> <hr/> <p>³⁴ <i>Rule 3 (x)]. These Rules further emphasise that waste generator shall (a) take steps to minimize generation of plastic waste and segregate plastic waste atsource in accordance with the Solid Waste Management Rules,2000 or as amendedfrom time to time and (b) not litter the plastic waste and ensure segregated storage of waste at source and handover segregated waste to urban local body or gram panchayat or agenciesappointed by them or registered waste pickers', registered recyclers or wastecollection agencies.</i></p>	<p>Machine was installed at Central Workshop/GOC for handling Plastic Waste. Further, provision of Plastic Bottle Crushing Machine is under progress at 16 identified Railway Stations.</p> <p>Plastic Bottle Crushing Machine has been installed at OTP Railway Station. And Zonal and Divisional Nodal Officers have been advised to dispose Plastic Waste generated through Authorized recyclers.</p> <p>SWR: Bins for waste plastic bottle has been provided at Railway Stations. PBCMs are installed at all 12 nominated Railway Stations except at Srirangapatnam due to very less footfall/plastic waste and unmanned stations. Assessment of plastic waste generation has been done at all 12 nominated NGT stations of division. Footfall at PANP is less and the amount of daily waste generated is very less in the order of 5-10 Kgs out of which plastic waste is very less.</p> <p>In all new contracts for Hubli division cleaning, sanitization and disposal of waste for all kind of waste including plastic waste has been described.</p> <p>WCR: Ban has been imposed for using single use plastic at all nominated stations. A system has been put in place to collect waste in two colored dustbins. Segregation and</p>	<p>garbage for biodegradable, non-biodegradable & plastic waste is being done & also data is being maintained during the currency of contract is not acceptable as out of five selected stations where Plastic Bottle Crushing Machines are provided, only in Bandra Terminus quantity of plastic waste generated was assessed from January 2020. The measures taken by MoR to assess quantity of plastic waste generated from the remaining stations may be furnished.</p>
--	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

	<p>³⁵ <i>letter number 2016/Environ/01/01 dated 17.10.2016</i></p> <p>³⁶ <i>letter No. 2019/EnHM/11/01 dated 19.08.2019</i></p> <p>³⁷ <i>CR-Igatpuri, NR-Barabanki, Rohtak; NCR-Prayagraj Chheoki; NER-Gorakhpur, Chhapra, Haldwani; NFR- Hojai, New Jalpaiguri; NWR- Rai Ka bagh; SR-Melmaruvattur.</i></p> <p>³⁸ <i>NR- Panipat, Rajpura junction, Jalandhar Cantt; NCR – Agra Fort; NWR- Bikaner, Lalgah; SR – Ottappallam; SWR – Yelahanka, Pandavapura,; WCR – Hoshangabad, Pipariya, Katni; WR – Valsad, Bilimora Jn</i></p> <p>³⁹ <i>CR-Panvel, Wadi, NR-Moradabad NWR-Jaipur, SCR- Secunderabad, Kacheguda, SECR-Bilaspur, Raigarh, SER- Digha, SR-MGR Chennai Central, SWR- KSR Bengaluru, Krishnarajanpuram, Hubballi, WCR- Sawai Madhopur, WR- Bandra Terminus</i></p>	<p>disposal of waste is being done in appropriate manner. Waste disposal has been made a part of cleaning contract at all stations. Efforts are being made to minimize waste generation at all stations. 19 Nos. PBCM's have been provided at 15 stations.</p> <p>WR:</p> <p>Vadodara – 06 PBCM have been installed at Vadodara. Bandra Terminus & Dahod-For collection & disposal of plastic waste mainly consisting PDW waste bottles, Total 123 Plastic Bottle Crushing Machines at 76 stations have been installed on WR including Bandra Terminus (5) & Dahod (1) stations. Also Plastic only Bins are provided at these stations. Coaching Depots (Ahmedabad, Indore) - Negligible Plastic Waste is generated in Coaching Depots. Bandra Terminus & Dahod Cleaning contracts at the stations are awarded in accordance with Standard Documents (SBD) which has suitable provisions for segregation and collection of waste and terms & conditions of Tender for cleanliness at stations. The garbage disposal at stations is carried out by cleanliness contract labour in coordination with municipal authorities. The assessment of waste / garbage for biodegradable, non-biodegradable & plastic waste is being done & also data is being maintained during the currency of contract. Coaching</p>	
--	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--

		<p>Depots (Ahmedabad, Indore) - Negligible Plastic Waste is generated in Coaching Depots. Vadodara, Bharuch -Plastic waste is collected as a part of dry waste and also BCM machines are installed at Stations for PET bottles. Mumbai Central, Bandra Terminus, Valsad, Bilimora Jn, Dahod - In the Mumbai division, the crushed plastic bottle material is collected by the service provider for recycling purposes. At Dahod station, crushed material of Plastic bottle crushing machines is auctioned and the amount is deposited in Railway revenue through MRs. Coaching Depots (Ahmedabad, Indore & Bandra Terminus) - Negligible Plastic Waste is generated in Coaching Depots.</p> <p>SER: 583 nos. of dustbins have been provided in 16 NGT nominated stations in SER. Provision of 86 nos. dustbins for ADA, PRR, BQA, VSU & BKSC is under process. At present 3 bin dustbin/ twin dustbin has been installed in station premises for proper segregation of biodegradable, non biodegradable & domestic hazardous waste. At present 09 Material Recovery Facility available in SER, where collection, segregation & disposal of plastic is done. At present 44 Plastic Bottle Crushing Machine is provided in 17 NGT nominated stations and procurement is process for rest 04 NGT nominated stations. Provision for</p>	<p>SECR- Though PBCM has been installed at stations but proper monitoring of their utilization is not being done. Audit by visiting Bilaspur station observed that two PBCMs</p>
--	--	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

		<p>segregation of plastic waste has been included in the mechanized cleaning contract over SER. As of now the PBCM at Digha has been made functional.</p> <p>SCR: <u>Plastic Only Bins:</u> KMT, RDM, SC stations are provided with plastic only bins.</p> <p>BVRM: provided with Plastic only bins.</p> <p>CD SC: plastic only bins are earmarked and provided at various locations in depot for collection of plastics and allied items. This depot has also fabricated “plastic only bin” in-house and planned to install at different locations in depot premises.</p> <p>CD/BZA: plastic only bins are earmarked and provided at various locations in this depot for collection of plastics and allied items.</p> <p><u>2. Assessment</u> BVRM: Assessment of quantity of plastic waste generated at BVRM station is being done regularly. As the generation is very less (0.6kg/month) and the station cleaning contractor is taking care in disposal of the same.</p> <p>SC: Assessment of quantity of plastic waste generated at SC station is being done. Quantity of Plastic waste is 67 Kgs per day. (Bottle crush waste-10kg+other plastic waste-57 Kg) Bottle crush waste was sold to authorised recycler and other</p>	<p>have been provided in the station. One PBCM (located at second class waiting room) was found out of order and garbage was thrown inside the machine. The machine was not found in prominent place and no signage was there to locate the machine.</p>  <p>ER- The reply is general and not zone specific. Further, it does not address the position relating to provision of plastic only bins, incorporation of relevant clause in cleaning contracts, initiatives taken to minimize the generation of plastic waste,</p>
--	--	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

		<p>plastic handed over to GHMC.</p> <p>CD SC: Assessment of quantity of plastic waste generated is being done and recorded by the outsourcing contractors. Approximately 275 kg of plastic waste is being generated.</p> <p>CD BZA: Assessment of quantity of plastic waste generated is being done and recorded by the outsourcing contractors. Approximately 30-35 kg of plastic waste is being generated.</p> <p>SECR: Bilaspur, Durg & Gondia CDs have PBCM to tackle the menace of plastic waste generated from plastic bottles. Divisions are accessing and segregating the quantity.</p> <p>At 20 stations Plastic Bottle Crusher machines have already been Installed. Further, Swachh Bharat Mission drives have been conducted to educate the commuters to minimize the use of plastic. Awareness programme through Nukkad Natak and through notices are also being organized.</p> <p>Separate dust bins have been provided for plastic waste.</p> <p>Ban for plastic below 50 microns has been Imposed at stations.</p>	<p>segregation of the same at source and end usage of plastic waste generated from the PBCMs.</p> <p>In Eastern Railway, as per latest status of compliance of Action Plan with verifiable indicators (22.02.2023), 35 out of 43 major stations were provided with PBCM.</p> <p>ECoR-As per the Annexure-2.6 of the Audit Report, assessment of quantity of plastic waste generated at stations was not made in seven selected units of ECoR. Further, provision for collection and segregation of plastic waste was specifically not made in the cleaning contracts of ECoR. However, the reply is silent on action taken by ECoR on this issue</p> <p><i>As is evident from above audit verification of facts mentioned in MoR's reply, more concrete action is required to be taken for assessment of plastic waste generated, provision of PBCMs, its proper functioning reduction in plastic waste generation by reduce/reuse/refuse plastic products and proper end usage of plastic waste generated from PBCMs. Action taken towards Rectification of issues mentioned in various ZR may please be furnished.</i></p>
--	--	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

		<p>As far as total NGT's nominated 720 major stations, 721 PBCMs have been installed at 483 out of 720 major stations, and for rest 137 stations, work is under progress.</p>	
--	--	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--

<p>2.11 Segregation, Collection and separate accumulation of Municipal Solid Waste</p>	<p>The Government of India has notified the Solid Waste Management (SWM) Rules, 2000 / 2016. As per Rule 4 (1), Railways are required to:-</p> <ul style="list-style-type: none"> □ Segregate and store the waste generated in three separate streams namely biodegradable, non-biodegradable and domestic hazardous wastes in suitable bins; □ Handover segregated wastes to authorised waste pickers or waste collectors as per the direction or notification by the local authorities from time to time. <p>The National Green Tribunal (NGT), in their order dated 18 March 2015 had directed that all Railway Platforms should be kept clean and free of any Municipal Solid Waste (MSW). MSW from platforms should be collected and disposed of in accordance with Solid Waste Management (SWM) Rules 2000 to the designated MSW disposal site only and to no other place. Railway Board, thus directed⁴⁰ (April 2015) Zonal Railways to comply with the above directions of the NGT and ensure maintaining necessary records for the same.</p> <p>Solid Waste Management (SWM) Rules, 2016 also specifies that no waste generator shall throw, burn or bury the solid waste generated by him, on streets, open public spaces outside his premises or in the drain or water bodies. In</p>	<p>Solid waste is being collected as dry and wet waste in separate bins. Twin Bins, separate storage Bins/Vats for Dry & Wet garbage have been installed at stations and coaching depots. Contracts for segregation of garbage at stations and coaching depots have been processed. However, it is being done on mutual understanding between existing contractor & railway. Further, necessary instructions for segregation, collection & separate accumulation of Municipal Solid Waste in Indian Railways have been circulated among all Zonal Railways for proper adherence.</p>	<p>The Reply is general in nature and not zone specific and station and coaching depot specific. Further, it does not address specific Audit observations, such as non-maintenance of records in support of handling Municipal Solid Waste (both biodegradable and non-biodegradable) etc. Remarks of MoR are indicating future course of action which should have been ensured earlier</p>
-----------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

	<p>compliance with these rules, Railway Board, vide letter dated 05 September 2016, instructed zonal Railways to get the collected waste at station segregated at source in differently colour coded dustbins and further handling of these wastes should be done separately. Railway Board also directed Zonal Railways (vide letter dated 09 December 2016) to enter into Memorandum of Understanding (MoU) with Local bodies for disposal of solid wastes from stations and also to maintain records regarding the same.</p> <p>Compliance with the rules prescribed in the SWM rules, 2016 and instruction of Railway Board (September 2016) <i>ibid</i> was assessed at all selected 109 stations and 30 coaching depots and following was observed: -</p> <p>i. Necessary records in support of handling Municipal Solid Waste (MSW) were not maintained at 41 stations and three coaching depots. In the absence of such records, compliance of the NGT's order could not be ascertained.</p> <p>Collected waste was not segregated at source in differently colour coded dustbins at 16 stations and 21 coaching depots.</p> <p>ii. No storage sites/vats⁴¹ were identified for collection of segregated waste before final disposal at 22 stations and 10 coaching depots.</p>		
--	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--	--

	<p>iii. Accumulation of biodegradable and non-biodegradable waste was not done separately at 47 stations and 17 coaching depots.</p> <p>The Indian Railways is traditionally dependent on the municipal waste management system to evacuate its waste. Further, in the absence of storage sites/vats for storing the segregated waste before final disposal by the municipal authorities, improper disposal of waste by burning, dumping into adjacent canals, low lying areas, and near the track, causing environmental pollution can not be ruled out. MoR stated (May 2022) that solid waste is being collected as dry and wet waste in separate bins. MoR added that Twin bins have been provided at all major stations. Reply of the Ministry is not tenable as it did not address specific Audit observations.</p> <hr/> <p>⁴⁰ <i>letter No. 2015/Environ/01/03 dated 30.04.2015</i></p> <p>⁴¹ <i>Vat refers to container for putting garbage</i></p>		
--	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--	--

<p>2.11.1 Transportation and disposal of solid waste</p>	<p>Audit reviewed the status of compliance of Railway Board's instructions consequent to NGT's order (as mentioned in para 2.11) regarding disposal of collected solid waste and following points emerged:</p> <ul style="list-style-type: none"> i. Solid waste was not disposed of at final disposal site at 14 stations and seven coaching depots; ii. Segregated waste was not transported in covered condition at 15 stations and five coaching depots; iii. Railway Administration did not enter Local Urban MoU with stations and 28 coaching 97 at Local bodies for disposal of solid waste/Bodies depots. iv. No record was kept for storage and disposal of waste as per NGT/RB directives at 65 stations and 22 coaching depots. v. Td waste picker or the system of handling over segregated waste to authorize at 50 was not in place as envisaged in the extant instructions waste collector coaching depots 3 and 1 stations. (Annexure 2.7) <p>MoR in their reply stated (May 2022) that cleaning contracts have been awarded at all the major 720 stations and solid waste is handed over to respective municipal bodies for disposal. Reply is, however, silent on the issues related to storage and transportation of solid waste commented in the report.</p>	<p>Cleaning contracts have been awarded in almost all the major 720 stations and Solid waste generated from cleaning of trains is collected by depot housekeeping contractor and dropped at centralized waste collection points.</p> <p>The solid waste in-turn handed over to the municipal authorities for proper disposal by contractor as part of the contract agreement.</p> <p>Disposal of waste is being ensured as per NGT guidelines.</p>	<p>Reply is general in nature and not specific to the audit observations incorporated in the review .MoR's reply is silent about transportation of segregated waste in uncovered condition, non-entering of MoUs with LUBs and non-maintenance of records for storage & disposal of waste.</p>
---------------------------------------------------------------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

<p>2.11.2 Facilities for Management of solid waste</p>	<p>Action plan at 37 identified major railway stations, subsequently to be implemented in balance of 720 stations as issued by Railway Board (April 2019) in context of NGT directives (March 2019) contained issues related to storage and disposal of waste like provisioning of Composting plant, Material recovery facility and segregated waste transportation.</p> <p>The status of implementation of the above policy decisions in compliance to NGT's order dated 26.03.2019 was reviewed (<i>Annexure 2.8</i>) in all the 109 selected railway stations and 30 coaching depots. Following observations are made:-</p> <ul style="list-style-type: none"> i. No provision made for wet waste processing facility at 77 stations and 29 coaching depots. ii. Material recovery facility not provided at 87 stations and 27 coaching depots. iii. Composting plant not provided at 77 stations and 28 coaching depots. iv. Waste recycling centres not set up at 102 stations v. ns and 29 coaching depots. <p>Further, eight stations⁴² were identified⁴³ for setting up solid waste management plants. RITES was engaged for bid process and project</p>	<p>Sealadh & Howrah: Composting plant and Biogas plant at are already working at major stations. Composting bin is provided at low waste generating stations. Compost bins shall be provided in coaching depot compliance will be taken. MRF facility is under process at HWH and SDAH stations which will cover nearby small stations. Subsequently other stations will be taken up. Waste segregation is already being done. Recycling of waste is being ensured through composting and biogas plants.</p> <p>Prayagraj station:</p> <p>At PCOI railway station & coaching depot there is no sufficient wet waste is available for processing and for PRYJ railway station, redevelopment of the station is under process and wet waste processing facility will be installed at the space identified for MRF. For PCOI railway station, Master Bins has been provided for segregation of waste. Segregation of Bio-degradable and Non Bio- Degradable waste is being done by contractor at PRYJ Coaching depot and waste is deposited at nominated place of Nagar Nigam Prayagraj for recycling & disposal by contractor.</p> <p>Varanasi Station:</p> <p>For systematizing waste management,</p>	<p>MoR reply is not specific about provision of waste management facilities (Provision of wet waste processing facility, Material recovery facility, Composting plants and Waste recycling centres) at the stations/coaching depots pointed out by audit. It covers only the action taken for setting up of solid waste management plants at six out of eight identified stations.</p> <p>Some notable observations poited out by ZR are:</p> <p>ER- As per latest status of compliance of Action Plan with verifiable indicators (22.02.2023), out of 43 stations, 7 were having composting plant and another 24 were having small compost bins.</p> <p>Further, as evident from the Railway's reply, MRF is yet to roll on.</p> <p>SR- Reply is not accepted.</p> <p>Further, regarding Solid Waste Management Plant at MGR Chennai Central, the Contract agreement for installation of waste to energy plant at Chennai Central was terminated on 06-02-2020 due to the failure of contractor to complete the work. After that, for the past three years</p>
---------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

	<p>management for these plants. Review of implementation of setting up of solid waste management plant at the identified eight stations revealed that at 7 stations (except at Patna station) the solid waste management plant was not set up.</p> <hr/> <p>⁴² <i>Chhatrapati Shivaji Maharaj Terminus, Patna, Sealdah, Howrah, Prayagraj, Varanasi, Secunderabad and MGR Chennai Central.</i></p> <p>⁴³ <i>Environmental Sustainability Annual Report 2016-17 of the Indian Railways</i></p>	<p>Northern Railway has, in partnership with Government of Uttar Pradesh (GOUP) and German Development Cooperation (GIZ) has launched an initiative to employ the principles of circular economy to enable sustainable waste management at Varanasi Cant railway station and in AEN railway colony in the city of Varanasi.</p> <p>The initiative in Varanasi aims at creating model zero-waste railway station and zero-waste railway colony in the city of Varanasi. Waste audit has been done at Varanasi Cant railway station in November 2021 by LAKSHYA foundation and in February 2022 by Massive Earth Foundation. It was found that 2.3 tonne of waste per day is getting generated. LoA for construction of MRF Shed has been issued to M/s Goyal Construction, Ghaziabad on 26.09.2022. A tender is planned to be floated shortly for selection of MRF Operator. Based on the successful implementation of the project at BSB station, the model shall be proliferated at other suitable locations.</p> <p>Development of training modules on various aspects of waste management and circular economy for capacity-building of different levels of railway functionaries is</p>	<p>there was no action in this regard.</p>
--	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--------------------------------------------

		<p>in progress. A pilot training module has been prepared and training held on 21.06.2022 and 22.06.2022 for around 100 IR officials nominated by Railway Board to obtain their feedback. A revised module is being prepared based on the feedback received.</p> <p>Secunderabad:</p> <p>Solid waste management facility at Secunderabad station for wet and dry waste processing is given outsourced to M/s Rekart Innovations Pvt Ltd on 06.05.2022 and the plant erection work is in progress.</p> <p>MGR Chennai Central:</p> <p>Solid waste management plant of 1000 Kg/day is planned for MAS station.</p>	
--	--	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--

<p>2.12 Conclusion</p>	<p>Huge quantum of waste generated at the stations and at the coaching depots warranted continuous actions for assessment, segregation, storage and its disposal. There were statutory rules and series of orders issued by NGT directing IR to take action on matter related to waste management, which were required to be complied with.</p> <p>The important recommendations of the PAC for setting up EnHM directorate at the zonal and at the divisional level were partially complied with. Accountable entities at the railway stations, divisions and at the zonal level were not constituted in 38.60 <i>per cent</i> of the stations test checked. Assessment of quantum of garbage generated in the categories biodegradable and non-biodegradable was not done at many stations despite recommendations of PAC in this regard. Despite directions of the NGT, a large number of stations had not even applied for CTEs/CFOs.</p> <p>The progress on implementation of action plan with 24 verifiable indicators at 37 major stations as directed by NGT was not satisfactory. ETPs/STPs/WRPs, waste to composting plant etc remained to be provided till March 2020. Requisite clauses were not incorporated in the cleaning contracts with agencies for proper segregation and disposal of waste. Efforts to execute cleanliness and waste management works through CSR met with little success.</p>	<p>Work related to EnHM is being done by Mechanical & Commercial Deptt. where EnHM wing has not been established. However, All zonal Railways are being advised for establishment of EnHM wing at zonal and at divisional level where EnHM wing has not been established.</p> <p>At Headquarters, under Mechanical Engineering Departments, accountable entities were earmarked and in divisions under Additional Divisional Railway Managers, Senior Divisional Commercial Managers / Senior Divisional Mechanical Engineers are nominated as nodal officer. However, all zonal railways are being asked for constitution of accountable entities wherever have not been constituted.</p> <p>Waste generated in the station are disposed through contracts to the municipal area as per the terms and conditions of the contract.</p> <p>All efforts are being continuously made for compliance of NGT directives and associated regulations.</p> <p>At present 624 stations possess Consent To Operate (CTO) & at 496 station, it is in progress for re-certification and Consent to establish (CTE) is not necessary as stations have been established long back before implementation of EP Acts therefore, CTE deemed achieved as is</p>	<p><i>Still setting up of EnHM wings at Zonal, Divisional & Station level has not been ensured in all the zones. Now, as stated by MoR, they have advised all the zones for positive action; which required to be monitored for proper implementation.</i></p> <p><i>Constitution of Accountable entities at Zonal, Divisional & Station level has still not been ensured in all the zones. For better monitoring of Management of waste, it is desirable that in addition to issuing instructions to the zones, Railway Board should devise a time bound program for constitution of Accountable entities at each level.</i></p> <p><i>More efforts are required to be made to strengthen the process of assessment of waste being generated so that management of waste is planned and done properly, as pointed out by audit</i></p> <p><i>Implementation of 24 Verifiable indicators at major stations is still not accomplished and is ongoing for which continuous monitoring at Railway Board level is required</i></p> <p><i>CTE/CFO is either not obtained or</i></p>
-------------------------------	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

	<p>Important directions of Railway Board to formulate Joint Procedure Orders for collection of pantry car garbage were not complied with at many stations. Installation of PBCMs at stations evoked slow response as installation of PBCMs (March 2020) was far short of that planned.</p> <p>Segregation of accumulated solid waste in biodegradable waste and non-biodegradable category in compliance to Solid Waste Management Rules was not done at many stations. Further, records for storage and disposal of such waste were not maintained and in large number of stations. MOUs with ULB/LBs for disposal of waste were not ensured. Progress towards construction of the required infrastructure for management of solid waste such as waste composting plants, waste segregation and recycling plant was poor in respect of the stations test checked. The instructions issued by Ministry of Railways for managing environment and housekeeping works did not have clear demarcation of role and responsibility of managing waste generated at various activity centres. Besides, fund allocation exclusively for waste management was not earmarked.</p>	<p>implicit in CTO. Establishment of ETP/STP/WRPs and waste composting plant require huge infrastructural inputs, at present 144 such units are established over 720 major stations. Many are under various stage of progress like under construction, sanctioned and some are at present necessary like at Prayagraj Station as recycled water will be provided for use of Railway purpose for station as per MOU between Railway ministry and ministry of water resource river development and Ganga Rejuvenation which will reduce fresh water consumption for interior purpose so there is no need to set up recycle plant at PRYJ & PCOI railway Stations. COVID also affected this.</p> <p>PBCM are available at 441 out of 720 major stations having a total number of 639 PBCM.</p> <p>Arrangements are in place to regularly clear waste from railway premises including railway stations. Moreover, periodic contracts are also awarded for garbage disposal and rag picking to ensure proper cleanliness at railway stations. The service providers have to adhere to the extent pollution control and environmental norms</p> <p>Indian Railways have also taken various initiatives to reduce, recycle and dispose plastic waste generated in stations in an eco-friendly manner. Furthering the cleanliness and the green agenda, it has</p>	<p><i>not renewed for many major stations.</i></p> <p><i>ETP/STP/WRP, is still not accomplished for which continuous efforts are required</i></p> <p><i>More concrete action is required to be taken for assessment of plastic waste generated, provision of PBCMs, its proper functioning reduction in plastic waste generation by reduce/reuse/refuse plastic products and proper end usage of plastic waste generated from PBCMs</i></p> <p><i>Moreover, MoR's reply is silent about transportation of segregated waste in uncovered condition, non-entering of MoUs with ULBs and non-maintenance of records for</i></p>
--	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

		been decided that Zonal Railways shall install Plastic Bottle Crushing Machines (PBCM) at strategic and prominent locations in order to motivate passengers to dispose plastic waste in a responsible manner.	<i>storage & disposal of waste.</i>
Summary of Audit Findings	<ul style="list-style-type: none"> • PAC recommendations for setting up EnHM directorate at the zonal and at the divisional level were partially complied with. • Role and responsibilities with specific reference to Waste Management activities were not clearly defined. Further, demarcation of the funds exclusively for waste management activities was also not done. Absence of Accountable entities at various levels despite directives of NGT has adversely affected the monitoring of the key issues related to waste management. • Progress on implementation of verifiable indicator in terms of NGT's order was not encouraging. • PBCM not installed at stations as planned and even where installed, the same were not functioning. • Requisite clauses not incorporated in the cleaning contracts with agencies for proper segregation and disposal of waste. Further, Railways lacked infrastructure for management of solid waste. 	Noted Please.	<i>No further comments to offer, as it has been noted by MoR.</i>

<p>2.13 Recommendation</p>	<p><i>IR needs to proactively ensure formation of EnHM wings at zonal and division level and constitution of accountable entities as directed by NGT to strengthen the waste management mechanism. IR also needs to define clear cut role and responsibilities and fund allocation exclusively for waste management activities. Besides this, IR needs to put in place an effective monitoring mechanism for managing plastic as well as solid waste in an environment friendly manner.</i></p>	<p>Noted for compliance please. However, following is submitted:</p> <p>(i) Work related to EnHM is being done by Mechanical & Commercial Deptt. where EnHM wing has not been established. However, All zonal Railways are being advised for establishment of EnHM wing at zonal and at divisional level where EnHM wing has not been established. At Headquarters, under Mechanical Engineering Departments, accountable entities were earmarked and in divisions under Additional Divisional Railway Managers, Senior Divisional Commercial Managers / Senior Divisional Mechanical Engineers are nominated as nodal officer. However, all zonal railways are being asked for constitution of accountable entities wherever have not been constituted.</p> <p>At present 624 stations possesses Consent To Operate (CTO) & at 96 station, it is in progress for re-certification and Consent to establish (CTE) is not necessary as stations have been established long back before implementation of EP Acts therefore, CTE deemed achieved as is implicit in CTO.</p> <p>(ii) Indian Railway is continuously working to achieve 100% implementation of 24 verifiable indicators in respect of 720 major stations. The monitoring of all 24 verifiable indicator for 720 major</p>	<p><i>As has been recommended by audit and accepted by MoR, effective monitoring is required for compliance of statutory regulations for waste management process i.e. collection, segregation, storage & ensuring arrangements with local bodies for transportation and disposal of solid waste.</i></p>
----------------------------------------------	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

		<p>stations are being done regularly at Railway Board's level.</p> <p>(iii) Regular monitoring for compliance to statutory regulations for managing waste right from collection, segregation of waste to ensuring arrangements with local bodies for transportation and disposal of solid waste is being done. IR, as per Audit recommendation, will endeavour to effectively monitoring compliance to statutory regulations for managing waste right from collection, segregation of waste to ensuring arrangements with local bodies for transportation and disposal of solid waste. (iv) All Zonal railways are being advised to strictly enforce measures for separate collection/segregation of plastic waste and disposal thereof in an environment friendly manner.</p>	
Chapter 3: Management of waste generated at Railway workshops, Maintenance Sheds Coaching Depots and Production Units			
Audit Objective: 2 <i>Whether the assessment, management and disposal of waste generated at Railway workshops,</i>	<p>Indian Railways has established a network of workshops and maintenance sheds for locomotive/coaches/ wagons besides various Production units. During maintenance/ repair/ production activities, these units generate huge quantum of solid waste and waste water contaminated with cleaning agents, oil,</p>	Noted please.	No further comments.

<p><i>maintenance sheds and production units was done as per applicable laws and rules</i></p>	<p>lubricants, grease, heavy metals and hazardous solids. Waste water and hazardous waste generated is an area of utmost concern from environmental perspective which calls for proper assessment, treatment, storage and disposal as per Acts/Rules framed by Centre/State Pollution Control Boards. Deficiencies noticed in management of waste in these activity centres (selected 101⁴⁴ Workshops, Sheds and Production Units and 30 Coaching depots⁴⁵) are covered in this chapter.</p> <hr/> <p>⁴⁴ <i>22 Mechanical workshops, 09 S&T Workshops, 10 Engineering workshops, 18 Diesel Loco sheds, 15 Electric Loco sheds, 19 MEMU/DEMU/EMU car sheds & 8 Production unit</i></p> <p>⁴⁵ <i>Across 17 Zones including RPU & Metro Railway, Kolkata.</i></p>		
<p>3.1 Consent to Establish (CTE) or Consent for Operation (CFO) under the Water Act, 1974</p>	<p>Sections 24, 25 and 26 of the Water (Prevention and Control of Pollution) Act, 1974 (as amended in 1978 and 1988) provided that no person shall except with the previous consent of the State Pollution Control Board (SPCB), establish or operate any industrial plant which is likely to discharge sewage or trade effluent into a stream or well or sewer or on land. If any</p>	<p>CR: Diesel Loco shed Kalyan is in conversion phase from maintenance of Diesel Locos to Electric Locomotives. Generation of waste in form of released components is different in Diesel Locomotives and Electric Locomotives. Hence necessary procedure will be done to obtain the CTE after conversion. For Kurla car shed CTE/CFO not available and will be processed.</p>	<p>CR- Railway Board has reiterated the reply to audit's observations in the Audit Report. No remarks</p>

	<p>plant was in operation before the enactment of the Water Act, it was required to obtain CTE /CFO within a period of three months. The National Green Tribunal (NGT) in its directives⁴⁶ issued in August 2020 held the same view.</p> <p>Compliance to statutory provisions was examined in selected units and it was observed that CTEs/CFOs were not obtained as of March 2020 in 40 units⁴⁷ (Details indicated in <i>Annexur-3.1</i>). No specific reasons were available on record for non-obtaining of CTE/CFO by these units. Despite specific stipulation under Water Act, inadequate compliance in these 40 units is indicative of ineffective monitoring on the important issue of environmental concerns.</p> <p>⁴⁶ <i>OA number 141/2014 (Saloni Singh Vs Union of India) issued in August 2020.</i></p> <p>⁴⁷ <i>02 Mechanical workshops, 05 S&T Workshops, 06 Engineering workshops, 02 Diesel Loco sheds, 08 Electric Loco sheds & 17 MEMU/DEMU/EMU car sheds</i></p>	<p>ECR: DEMU Shed Sonpur has obtained CTE and CTO from Bihar State Pollution Control Board.</p> <p>For Electric Loco Shed/ GOMOH, DNR & Coaching Depot RNCC , CTE & CTO from Pollution control board will be obtained.</p> <p>DLS/SPJ-CTE is already obtained CTO will be renewed from pollution control board. Mechanical Workshop /SPJ.</p> <p>There is no generation of hazardous waste at Mechanical Workshop /SPJ workshop as it is mainly engaged in manufacturing of new BOXNHL MBS wagon, BRN229ML, BVCM and repair of unloadable C- category BOXN wagon. There is only generation of ferrous scrap as off cut of SS and MS material during manufacturing of new wagon and generation of ferrous scrap during repair work. These scraps are sent to stores department for disposal through DS-8 regularly.</p> <p>ECoR: Diesel Shed/WAT, CRW/MCS & WRWS/VDPD are having valid CTE/CFOs. Instructions have been issued to concerned departments for obtaining CTE/CTO.</p> <p>CTO for ELS/Angul have been applied on line on 28.05.2021. CTO for MEMU Shed/KUR and ELS/VSKP are under process. Coaching depot VSKP & SBP have obtained their CTE/CFOs.</p> <p>NR:</p> <p>CTO for CBW/LKO is under process. An</p>	<p>ECoR- As per Annexure 3.1 of the audit report, CTE/CFO were not obtained in respect of two units i.e., ELS/ANGL and MEMU Shed/KUR of ECoR. Present status of the two may be furnished.</p> <p>NR- Final outcome of the CTO/CTE may be advised to audit</p>
--	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

		<p>ETP of capacity 50 KLD is operational at the workshop on and is successfully running as per Rules 24, 25, of 26 of Water (Prevention and Control of Pollution) Act, 1974. Application for CTO has been submitted in March 2022. Delay has been caused and fees could not be deposited due to a technical problem with Invest UP Nivesh Mitra Portal. The problem has been solved now, and payment of fee is under process.</p> <p>CTE/CTO for DSL Shed AMV is yet to be obtained. Necessary instructions have been given regarding the same.</p> <p>CTE/CTO for DEMU Shed JUC is yet to be obtained. Application for CTO is being processed.</p> <p>NCR: Certificate of CTE/CTO by Wagon repair WORKSHOP JHANSI, has been obtained.</p> <p>The certificate for Consent to Establish (CTE) and Consent to Operate (CTO) under section 25 & authorization certificate (CFO) has been taken by Electric Loco shed, Kanpur.</p> <p>NER: UPPCB consent order no. 125675/UPCCB/ Gorakhpur (UPPCBRO)/CTO/water/ Gorakhpur 2021,dt. 24.06.2021 for Gorakhpur workshop</p> <p>UPPCB consent order no. 93676/UPCCB/ Bareilly (UPPCBRO)/CTO/water/Bareilly/2020,</p>	<p>NER- It may be clarified whether the CTO and CTE mentioned in the reply are valid till date or not..</p> <p>NFR- Engineering Workshop, Bongaigaon: CTE and CFO has not been obtained from SPCB under Water Act, 1974. (d) Siliguri Jn. Station: Final position of online application may be provided.</p>
--	--	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

		<p>11.09.2020 for Izzatnagar Workshop. Loco shed Gonda has obtained consent to Establish 100 KLD ETP.</p> <p>NFR: At New Bongaigaon, CTE was obtained in 2010-11 and CFO was obtained and renewed up to March'21. CFO for the year 2022-23 has been applied on 15-03-2022 and approved on 27-07-2022 by the concerned SPCB. Authorization under hazardous waste (MHTM) rules 2006/2016 has been applied on 30-10-2021 and is in process at Regional HQ of PCB.</p> <p>Registration process for CTE and CFO through respective portal for Engineering Workshop is completed and application for renewal of CFO has been submitted through the portal.</p> <p>At Katihar division, no hazardous waste is disposed from Diesel Shed Siliguri Jn.. The effluents are treated in ETP and waste generated is disposed through incinerator. However, CTO has been obtained for water and air for Diesel Shed/SGUJ. Online application with respect to Siliguri Jn. station has already been submitted. DEMU Shed being covered under Siliguri Jn. station, no separate application is required to be processed.</p> <p>NWR: All Loco workshop- Consent to Establish (CTE) and Consent to operate are available and valid from 22.06.2018 to</p>	<p>NWR- The position in this regard was verified and found correct. The position in this regard was reviewed and it was found that an application to obtain CFO for DEMU Shed MTD had been submitted to Rajasthan State Pollution Control Board (RSPCB) on 02.11.2022 and the same is under process.</p> <p>SR- The reply is silent on the following specific issues:</p> <ul style="list-style-type: none"> • Not obtaining CTE in four units viz. Engineering Workshop/AJJ, Car shed/TBM, Electric Loco shed/AJJ, Diesel Loco shed/ED. • Not obtaining CFO by two units viz. Car shed/TBM, Electric Loco shed/AJJ. <p>SCR- Remarks are silent about CTE/CFO in respect of EWS/LGD</p>
--	--	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

		<p>31.05.2023.</p> <p>DEMU Shed –MTD- An application to RSPCB has been submitted to obtain CFO for existing facilities and CTE for proposed facilities, which is under process.</p> <p>SR: The CTO (consent to operate) under Water Act is obtained from TNPCB by the Workshops regularly and the consents to establish and for operating under Water Act is regularly renewed once in two years as stipulated by the State Pollution Control Board.</p> <p>SCR: CTE/CFO has been obtained from SPCB for EMU Car shed/MLY. Authorization from SPCB for disposal of Hazardous waste has been obtained as a part of CFO.</p> <p>SER: ELS, Santragachi & EMU Car shed Tikiapara is not required as per GAZ notification no.GSR 178E dated 01.03.2019 issued by MOEF & CC.</p> <p>SECR: CTE/CTO under water & air act has been obtained for WRS/Raipur, MIBW/Nagpur, Diesel Loco Shed/Raipur and Diesel Loco Shed/MIB.</p> <p>SWR: Not obtained for DEMU Shed/BNC.</p>	<p>SER- CTE/CFO in respect of two units S&T workshop Kharagpur and Engineering Workshop, Sini was not obtained. However, no remarks was offered on Action Taken.</p> <p>SECR- Audit noticed that CTE/CTO under water & air act is still under progress at Electrical Loco Shed/Bhilai and MEMU Shed/Bhilai</p> <p>SWR- As per the reply furnished, CTE/CFO has not been obtained in respect of DEMU Shed/BNC.Measures taken by MoR to rectify the situation may be furnished.</p> <p>It can be observed from above that CTE/CFO has not been obtained or renewed in many of Workshops/sheds, as pointed out in the Audit Report. Measures taken by MoR to rectify the situation may be furnished</p>
--	--	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

		<p>Consent has been obtained periodically for DLS/KGM.</p> <p>WR:</p> <p>EMU Car Shed, MMCT- No policy guidelines are available for CTE/CFO for EMU Car Shed. SPL workshop has been granted Consent for Operation (CFO).</p>	
--	--	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--

<p>3.2 Authorisation from SPCBs for handling of Hazardous and other waste</p>	<p>Hazardous waste is defined as any waste which by reason of any of its physical, chemical, reactive, toxic, flammable, explosive or corrosive characteristics causes danger or is likely to cause danger to health or environment, whether alone or when in contact with other wastes or substances.</p> <p>Rule 6 (1) of Hazardous and other Wastes (Management, and Transboundary Movement) Rules, 2016, provides that every occupier of facility engaged in generation and handling of hazardous waste is required to obtain authorization from the State Pollution Control Board (SPCB). Such occupiers, which includes Railway workshops, sheds and production units, are required to segregate the hazardous waste generated from other wastes and store properly before its disposal as per the procedures laid down by the SPCBs/CPCB.</p> <p>Examination of the related records in the units selected revealed that 50 units⁴⁸ (<i>Annexure- 3.1</i>) had not obtained CTE/CFO under the Hazardous Waste Management Rules from the concerned SPCBs. Thus, the stipulations under these rules regarding identification, segregation,</p>	<p>CR: Diesel Loco Shed Kalyan is in conversion phase from maintenance of Diesel Loco to Electric Locomotive utilization. In both loco generation of waste in form of released components is different, hence necessary procedure will be done to obtain the CTE after conversion. CR Car shed, Kurla not available and will be processed.</p> <p>ER: Workshops and Diesel Sheds are already having SPCB authorization.</p> <p>ECR: DEMU Shed Sonpur- Necessary Authorization as prescribed for handling of Hazardous and other waste will be</p>	<p>CR- Railway Board has reiterated the reply to audit's observations in the Audit Report. No remarks.</p> <p>ER- Review revealed that Signal Workshop/HWH, Tikiapara Coaching Depot, Electric Loco Shed/HWH, EMU Car Shed/HWH and EMU Car Shed/Bandel although handled Hazardous wastes, did not apply for Authorisation.</p> <p>Audit also observed that in none of the units including workshop and diesel sheds, the stipulations under Hazardous and other Wastes (Management, and Transboundary Movement) Rules, 2016 regarding segregation, storage and disposal of hazardous waste were not complied with.</p>
-------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

	<p>storage and disposal of hazardous waste by these units were not complied with. The resultant impact on health of workers of these units in particular and neighbouring community in general could not be ruled out in the absence of monitoring.</p> <hr/> <p>⁴⁸06 Mechanical workshops, 05 S&T Workshops, 06 Engineering workshops, 07 Diesel Loco sheds, 08 Electric Loco sheds & 18 MEMU/DEMU/EMU car sheds</p>	<p>obtained from SPCB.</p> <p>Electric Loco Shed/GOMOH - Certification from SPCB will be obtained for handling hazardous wastes.</p> <p>Mechanical Workshop /SPJ - No hazardous nature of waste is generated in this workshop.</p> <p>ECoR: Agreed. The DLS/VSKP, Wagon Repair Workshop/ VDPD (VSKP) and CRW/MCS have obtained authorisation for handling hazardous wastes. Instruction has been issued to all concerned for obtaining such authorisation for Electric Shed and MEMU Shed, Coaching Depots at PUI, BBS, VSKP & SBP etc.</p> <p>NR: CBW/LKO, KLKW, DLS/AMV, DLS/TRD, DLS/LDH, DEMU Car Shed/JUC and EMU Car Shed/GZB pertain to NR.</p> <p>a. TKD shed is handling hazardous waste (HW) satisfactorily, as follows:</p> <ul style="list-style-type: none"> • It is storing HW safely in closed steel drums and proper labelling is also done. • Complete records for the sale, transfer storage, recycling, recovery, pre-processing, co- processing and utilization of HW including refused oil are available 	<p>ECoR- ECoR should ensure obtaining of necessary authorization from SPCB early in respect of the remaining units dealing with hazardous waste</p> <p>NR- Final outcome may be advised to audit</p>
--	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

		<p>at TKD shed.</p> <p>CFO of Diesel Shed/TKD under section 25 and 26 of Water Act and Hazardous Waste Rules had been regularized by DPCC till May 2020. Administrative approval for next 5 years (till May 2025) has been obtained. Application for CFO under Hazardous Waste Management Rules (HWMR) is being processed.</p> <p>The hazardous waste generated from Diesel Shed/LDH, DEMU Shed JUC and KLKW is sent to JUDW for further disposal. DLS/LDH has initiated the process for authorization. Details of hazardous waste generated have been sought from concerned sections and the application for authorization will be submitted to the Pollution Control Board.</p> <p>In DMU shed JUC the list of hazardous waste has been prepared and application for authorization will be submitted.</p> <p>For EMU shed GZB, Consent Order from UP Pollution Control Board (UPPCB) was obtained in 2021, and it expired on 31.07.2022. The annual fee has been submitted by Railway up to 31.12.2022, and correspondence has been made for extension of the Consent Order accordingly. Hazardous waste from EMU Car Shed GZB like lubricants, transformer oil, grease, batteries, etc. is disposed off</p>	
--	--	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--

		<p>regularly to Dy. CMM/General Store Depot, SSB along with a few other used parts to Engg. department for re-using in track maintenance.</p> <p>In Rolling Stock workshop, CB, General Store Depot/AMV has been nominated for disposal of hazardous waste like grease, transformer oil, acid batteries, etc. Keeping in view the Rule 14 of Environmental Rules, 1986, Form 4 and Form 5 have been submitted to SPCB (UPPCB) in March 2022 with details regarding all hazardous waste generated at the workshop.</p> <p>Necessary instructions have been issued to all concerned units vide this office letter no. 143- M/52/Court Case (NGT)/Pt. V dated 13.12.2021 to ensure compliance for the same.</p> <p>NCR: Wagon Repair Workshop Jhansi :- For storage of hazardous waste, as far as grease is concerned which is generated in workshop is stored in drums and sends to GSD/ Jhansi which is further disposed by Dy. CMM/System through authorized recyclers of UPPCB and do the needful process for safe disposal of such waste.</p> <p>Electric Loco Shed/Kanpur:- Electric Loco shed, Kanpur has already obtained CTE/CFO under the Hazardous Waste .</p>	
--	--	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--

		<p>Management Rules from the SPCB with validity upto 31-12-2024. Current contract for disposal of hazardous a contract has been awarded to firm on 02.04.2022 to M/s Bharat Oil and Waste Management Ltd. Kanpur who have authorization certificate No.1486/UPPCB/GZB/UPPCBBO)/HW M/ GZB/2018 valid upto 01-04-2023. Vide above contract, Kanpur has planned to dispose Qty 4000 kgs Solid waste & Qty 20000 kgs rubber waste item. Out of which 11500 kgs Rubber items wastage has been disposed till 19.07.2022 Contract validated upto 01.04.2023.</p> <p>NER: UPPCB authorization no. 10918/UPPCB/ Gorakhpur (UPPCBRO)/HWM /Gorakhpur/2020 dt.19.02.2020 valid up to 31.12.2024. Scrap which is non hazardous waste generated in both the workshops premises is disposed by store department. Disposal of Hazardous waste was carried out by SPCB approved firm via out sourcing at Loco shed Gonda. Gonda shed mainly involved in maintaining Electric Locomotives (negligible hazardous waste generation) therefore this work has not been proposed for renewal.</p> <p>NFR: At Diesel Shed/Siliguri Jn, efforts are being made to analyze the characteristics</p>	<p>NFR- (a) Diesel Shed, Siliguri: Certificate for CTE/ CFO under Hazardous Waste Management Rules was under process.</p> <p>(b) EWS/Bongaigaon: No Hazardous Waste generated. Hence, CTO and CFO was not obtained.</p> <p>(c) New Bongaigaon: Used batteries were found sold to registered authorized recyclers by e-Auction,</p>
--	--	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

		<p>of used oil to increase reuse/recycling of the same. At present, the lubricating oil is reused by Engineering Department for lubricating the track fittings & joints. Necessary application for obtaining Consent for handling hazardous waste is submitted to SPCB and the same is expected shortly.</p> <p>At EWS/Bongaigaon, Hazardous generation Waste does not exist.</p> <p>At New Bongaigaon, used batteries are sold only to registered authorized recyclers by e-auction to firms having authorization for recycling of hazardous waste. Storage of used batteries under covered shed has been started and furthermore space will also be developed for proper storage of used batteries.</p> <p>NWR: AII Loco workshop- Authorization for handling Hazardous waste has been obtained from RSPCB and valid up to 31.05.2023. DEMU Shed –MTD- Hazardous wastes i.e. oil, grease batteries are sent to stores for further disposal. However, process for obtaining CTO is underway.</p> <p>SR: The authorization to handle Hazardous waste is obtained regularly by the shops. The Consent to Establish (CTE), consent for Operation (CFO) under Hazardous Waste Management rules has not been</p>	<p>whereas storage of used batteries was found in covered and un-covered shed. Sufficient storage space was not available in Store Depot for all used batteries.</p> <p>SR- Reply is not accepted. Though hazardous waste were generated in the four units viz. Car shed/TBM, Electric Loco shed/AJJ, Diesel Loco shed/ED, no specific reply has been furnished by MoR in this regard.</p>
--	--	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

		<p>obtained in respect of Engineering Workshop at Arakkonam, hazardous waste generated therein.</p> <p>SCR: Authorization from SPCB for disposal of Hazardous waste has been obtained as a part of CFO.</p> <p>SECR: FWRS/Raipur, Motibagh Workshop (MIBW), Diesel Loco Shed, Raipur and Diesel Loco Shed, Motibagh, Nagpur have already obtained Authorization from SPCBs under Hazardous and Other Wastes (Management and Transboundary Movement) Rules 2016. Electric Loco Shed/Bhilai, MEMU Car Shed, Bhilai and Coaching Depot/Bilaspur have initiated the process for obtaining authorization under Hazardous and Other Wastes (Management and Transboundary Movement) Rules 2016.</p> <p>SWR: Not obtained for DEMU shed, BNC compilation and authorization has been obtained from KSPCB periodically by diesel loco shed, KJM. Authorization obtained from KSPCB and the details are (Authorisation No: 321542 valid upto 30.06.2021) Renewal of Authorisation is applied through online mode. i.e. XGN 17.09.2022. Awaiting for Authorisation from KSPCB.</p>	<p>It is evident from the position verified</p>
--	--	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-------------------------------------------------

		<p>WR: EMU Car Shed, MMCT has been obtained vide CFO No. Format 1.0/APAE Section/UAN No. 0000124691/CR/2204002074 dated 29.04.2022, valid upto 31.12.2024.</p>	<p>by Zonal Audit offices that authorization from SPCBs for handling of Hazardous & other waste is still not obtained for many workshops/sheds as pointed out in the Audit Report. Zone –wise Measures taken by MoR to rectify the situation may be furnished</p>
--	--	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

<p>3.3 Delay in Authorisation from SPCBs for handling of effluents and hazardous waste</p>	<p>Rule 6(1) of the Hazardous and other Wastes (Management and Trans-boundary Movement) Rules, 2016 provides that application for renewal of authorisation under these Rules may be made three months before the expiry of previous authorisation.</p> <p>Examination of the related records in the units selected for review in Audit revealed that 21 units⁴⁹ (<i>Annexure 3.2</i>) did not comply with the said Rules/conditions. In respect of renewal of CFO under the Hazardous Waste Management Rules as well as under the Water Act, delays in applying for renewal of authorization was noticed as indicated in Table 3.1 below:-</p> <p>Table 3.1 - Status on seeking authorization from SPCB</p> <table border="1"> <thead> <tr> <th>S. N</th><th>Range of delays in seeking renewal for authorization from SPCB</th><th>Number of units under HWM Rule</th><th>Number of units under Water Act</th></tr> </thead> <tbody> <tr> <td>1</td><td>1 to 06 months</td><td>1</td><td>3</td></tr> <tr> <td>2</td><td>06 to 18 months</td><td>1</td><td>8</td></tr> <tr> <td>3</td><td>18 to 30</td><td>2</td><td>5</td></tr> </tbody> </table>	S. N	Range of delays in seeking renewal for authorization from SPCB	Number of units under HWM Rule	Number of units under Water Act	1	1 to 06 months	1	3	2	06 to 18 months	1	8	3	18 to 30	2	5	<p>CR: Noted for future compliance.</p> <p>NR: DLS/LDH CTO under Air and Water Acts has been obtained by Diesel Shed LDH on 09.12.2019 and 09.11.2020 respectively from Punjab Pollution Control Board.</p> <p>NCR: Wagon Repair Workshop Jhansi :- Delay in renewal under the Water Act: There is delay of 36 months (as mentioned), but as per current status under section 25/26 of the water Act, 1974 consent is valid up to 31/12/2024, and in future the same will be obtained timely. Delay in renewal under the HWM Rules: The process of obtaining the CTE/CFO under Hazardous waste Rules will be initiated. ELECTRIC LOCO SHED/KANPUR:- Current certificate is validated upto 31.12.2024.</p> <p>NWR: All Loco workshop- In 2018 CTE/CFO were delayed due to paperwork. It has been noted and necessary measures have been taken to avoid this in future. Workshop-JU- There was a delay of 02 months in renewal of authorization from SPCB. Authorization is valid up to 30.04.2023.</p> <p>SR:</p>	<p><i>As replied by MoR and verified by Zonal Audit offices, there were instances of delay in getting authorization from SPCBs; which needs to be monitored for positive outcome.</i></p>
S. N	Range of delays in seeking renewal for authorization from SPCB	Number of units under HWM Rule	Number of units under Water Act																
1	1 to 06 months	1	3																
2	06 to 18 months	1	8																
3	18 to 30	2	5																

	months		
4	beyond 30 months	6	6

Reasons for such delays in obtaining renewals were not furnished by the Railway Authorities.

⁴⁹ ***06 Mechanical workshops, 01 S&T Workshops, 01 Engineering workshops, 05 Diesel Loco sheds, 04 Electric Loco sheds & 04 PUs***

CW/PER has obtained authorization for disposing of hazardous waste in the year 2017 under the TNOCCMS (Tamil Nadu. online consent management and monitoring system).

The delay of 12 months for the renewal under Water Act during of 2015-16 in respect of EWS / d Arakkonam is factually incorrect.

The payment of Renewal charges Rs. 5,17,232/- was completed by Railways through NEFT on 05.05.2015 and acknowledged by TNPCB on 26.05.2015. The Renewal of Consent Order No.150811507045 was issued by TNPCB on 20.08.2015. The processing delay has resulted due to the introduction of online system for the first time. It is reiterated that the renewal under Hazardous Waste Management is not applicable to Engineering Workshop /Arakkonam (A33) since there is no hazardous waste generated in this workshop, S&T/Workshop/Podanur: During the year 2008, authorization Member was given secretary/TNPCB's proceedings TNPCB/F

No.T4/32369/CBE/HWM/RM/08 dt.21/08/2008 and its stated that " The authorization is granted to operate a facility for collection, storage of hazardous wastes for the period of Five years i.e. up to August 2013 vide Authorization No.3254 dt.21/08/2008. Application forms submitted to the

		<p>Secretary, TNPCB on 20.08.2013 in connection with renewal of authorization including disposal of Hazardous waste.</p> <p>The workshop started disposal process of hazardous waste for 1.5 Tons of Dried Cyanide waste and 4.0 tons of Bakelite moulding scrap from June 2014. As per the guidelines of TNPCB, initially membership obtained from Industrial waste Management Association on 25.08.2014 to dispose 1.5 Tons of Dried Cyanide waste which was generated during the cyanide based Electro plating process and in the Bakelite moulding section and it should be disposed in a safe manner through landfill method. M/s Tamil Nadu waste management Ltd., Gummidipoondi is the only agency in Tamil Nadu approved by TNPCB for land filling after treatment of Cyanide waste and incineration of bakelite moulding scrap. Hence, single tender floated after obtaining GM's approval on 24/01/2017. Subsequently TNPCB's authorization for disposal could not be obtained in time due to administrative reasons. Tamil Nadu Pollution control Board has insisted for a fresh agreement to dispose the entire quantity of the above said hazardous waste. In this connection, again GM's sanction was obtained for single tender.</p> <p>SWR:</p>	
--	--	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--

		<p>Hazardous waste generated in division is sent to MYSS for further disposal. “Consent for operation and authorization” application has been sent for renewal before the expiry. KSPCB informed that Renewal of Authorisation will be able to apply only after obtaining CFO.</p> <p>WR: Earlier CFO was valid upto 31.12.2018. PL workshop had applied for its renewal on 31.10.2018 (60 days before its expiry as per consent condition). This CFO was granted to PL workshop on 04.02.2020, valid upto 31.12.2021. PL workshop sent a letter to MPCB for granting CFO on 09.05.2019. Then MPCB issued a Show Cause Notice (SCN) on 21.09.2019. Reply to the SCN was sent on 27.09.2019. MPCB official carried out PL workshop site inspection on 18.01.2020. This site inspection report was replied on 10.02.2020.</p>	
--	--	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--

**3.4
Submission of
Environmental
Statements**

In terms of Rule 14 of Environment (Protection) Rules 1986, every organisation carrying on an industrial operation or process is required to submit an Environmental Statement annually to the concerned SPCB as indicated in Table 3.2 below: -

Table 3.2 - Environmental statements required to be furnished annually to SPCB

Form	Extant Provision/Rule	Disclosure to be made about	Scheduled date of filing
Form 4	Hazardous Waste Management Rules, 2016	Quantity of waste generated category wise, quantity dispatched to disposal facility or recyclers or others, quantity utilized in-house and quantity in storage	30 th June

CR:

Environmental statements w.r.t. Hazardous waste and water & raw material consumption has partially been submitted. Henceforth it will be maintained periodically.

ECR:

DEMU shed / SEE has obtained Consent to Operate on 06.09.2022, so next onwards environmental statement, Form-V under the EP Rules and Form-4 under the Hazardous waste management rules shall be submitted to BSPCB. Mechanical workshop, Samastipur is engaged in manufacturing Wagons and C-category repair, only ferrous cuttings arises during process & no hazardous waste is generated during manufacturing process. These ferrous scraps/cuttings are handed over to stores.

ECOR:

The returns are filed as demanded by respective SPCBs. Form 3 & 4 are being filed but form -5 not demanded by SPCBs. If asked same will be also filed with SPCB by railway. Annual Return in Form-4 is regularly submitted by CRW/MCS, DLS/VSKP. Further, TREM Card for MCSW is not required as it is being handed over to GSD/MCS.

NR:

Hazardous Waste Management Rules has

			at the end of the year.		
	Form V	Water (Prevention and Control of Pollution) Act 1974 or Air (Prevention and Control of Pollution) Act 1981 or both	Water and raw material consumption, pollutants discharged in the environment and quantum of solid wastes and hazardous wastes generated by the units.	30 th September	<p>not been attained by 7 units, and Consent to Operate under Water Act has not been attained by 3 units, which are, CBW, DLS/AMV and DEMU/JUC.</p> <p>In Rolling Stock workshop, CB, General Store Depot/AMV has been nominated for disposal of hazardous waste like grease, transformer oil, acid batteries, etc. Keeping in view the Rule 14 of Environmental Rules, 1986, Form 4 and Form 5 have been submitted to SPCB (UPPCB) in March 2022 with details regarding all hazardous waste generated at the workshop. In DLS/LDH, environmental statements in prescribed forms, i.e. Form-4 and Form-5, will be submitted to the Pollution Control Board by 10.11.2022.</p> <p>Instructions have been issued to all other units vide this office letter no. 143-M/52/Court Case.</p> <p>NCR: Electric Loco Shed/Kanpur:- Annual return of wastages (Form-IV) & Environmental Statement (Form-V) as per Rule-14 under Environmental Statement has been submitted. Registration for such authorization has been done from ELS/CNB.</p>
	<p>Audit examined the position of submission of the said two Annual Environmental Statements and observed the following:</p> <p>i. Form-V under the EP Rules was not submitted to the concerned SPCBs by 83 units⁵⁰. Of these, consent under the Water Act was not obtained in 40 units</p>				

	<p>(Annexure 3.1).</p> <p>ii. Form- 4 was not submitted under the Hazardous Waste Management Rules in 84 units⁵¹. Of these, 50 units (Annexure 3.1) did not obtain authorisation under the Hazardous Waste Management.</p> <hr/> <p>⁵⁰ 14 Mechanical workshops, 09 S&T Workshops, 10 Engineering workshops, 13 Diesel Loco sheds, 13 Electric Loco sheds, 19 MEMU/DEMU/EMU car sheds & 05 Production Units</p> <p>⁵¹ 16 Mechanical workshops, 09 S&T Workshops, 10 Engineering workshops, 12 Diesel Loco sheds, 13 Electric Loco sheds, 19 MEMU/DEMU/EMU car sheds & 05 Production Units</p>	<p>NER: Environmental Statements have submitted for GKP and IZN workshops.</p> <p>NFR: At New Bongaigaon, used batteries are sold only to registered authorized recyclers by e-auction to firms having authorization for recycling of hazardous waste. Storage of used batteries under covered shed has been started and furthermore space will also be developed for proper storage of used batteries. The relevant Form in this regard (Form 4) is being submitted to SPCB. Similarly, for water also Form No. 5 is submitted. At Diesel Shed/SGUJ, efforts are being made to analyze the characteristics of used oil to increase reuse/recycling of the same. At present, the lubricating oil is reused by Engineering Department for lubricating the track fittings & joints. At EWS/Bongaigaon, generation of Hazardous Waste does not exist.</p> <p>NWR: Submission of Environmental statements are now being ensured in AII Loco workshop- on regular basis. In DEMU Shed –MTD, this will be compiled after authorization from SPCB.</p> <p>SR: At present the forms are submitted regularly to Tamil Nadu Pollution Control</p>	<p>As replied by MoR and verified by Zonal Audit offices, the submission of Environmental statements is being ensured now in majority of the units</p>
--	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------------------------------------------------------------------

		<p>Board by the authorities of Carriage & Wagon Workshop, Perambur.</p> <p>Form-5 under the EP Rules was submitted every year by EWS/Arakkonam till 2017-2018. The regular submission of Form-5 under EP Rules every year as stipulated by SPCB will be ensured by EWS/Arakkonam from current year onwards. The Form-4 under the Hazardous Waste Management Rules is not applicable to Engineering Workshop / Arakkonam since there is no hazardous waste generated in this unit. Further, it is stated that, annual returns pertaining to S&T/WS/PTJ is submitted in Form-IV before 30th June of every financial year. Based on that, Form - V will be submitted from this year onwards as advised.</p> <p>SECR: Form 4 & 5 is being submitted by workshops and Diesel Loco sheds (Raipur and Motibagh).</p> <p>SWR: Form 4 & V for filing annual returns of hazardous waste generation by Central Workshop; Mysuru South is submitted yearly to KSPCB before June-30.</p> <p>WR: RS Workshop, Dahod- is submitting returns in form V regularly from 2019- 20. EMU Car shed, MMCT- Submission of Environmental statement is being done as</p>	<p>pointed out by audit. Status of submission in respect of Lower Parel Workshop, (WR) , DEMU Shed/BNC (SWR) and Diesel Shed/SGUJ/NFR may be furnished.</p>
--	--	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------------------------------------------------------

		<p>and when required.</p> <p>Lower Parel Workshop- Form-4 have been submitted off-line to MPCB. Since 2008, Environmental statements in Form V are being submitted to MPCB.</p> <p>RS Workshop, Dahod- is submitting returns in form IV regularly from 2019-20. EMU Carshed, MMCT- Submission of Environmental statement is being done as and when required.</p>							
<p>3.5 Maintenance of records for storage and disposal of hazardous waste</p>	<p>As the hazardous waste generated in any facility causes danger or is likely to cause danger to health or environment, the Hazardous Waste Management (HWM) Rules provide various stipulations for proper segregation, storage, labelling and disposal of such waste. Some of the important provisions are indicated in Table 3.4 below:-</p> <p>Table 3.4 - Gist of rules/provisions required to be followed under HazardousWaste Management (HWM) Rules</p> <table><tr><th>Rule</th><th>Gist of rule/provision</th><th>Form prescribed</th></tr><tr><td></td><td></td><td></td></tr></table>	Rule	Gist of rule/provision	Form prescribed				<p>CR: Updated position of maintenance of records for storage and disposal of hazardous waste is as under: Form 3- 06 units Form 8 – 09 units Form 9 – 05 units Form 10 – 07 units</p> <p>ER: Workshop and diesel sheds are already having SPCB authorizations.</p> <p>ECR: DEMU shed / SEE has obtained Consent to operate on 06.09.2022, till now they are maintaining records manually. At Electric Loco Shed/ GOMOH Form-3:- Records. for storage of negligible value waste like jute and rubber gasket are not maintained and are disposed to suitable remote locations by means of cleaning</p>	<p>ER- The reply does not address the Audit observations.</p>
Rule	Gist of rule/provision	Form prescribed							

	1 7	Proper storage of such waste in containers and it's labelling	Form-8	contract. However, record for valuable waste generated during maintenance are regularly maintained and disposed/ auctioned through proper channel. Form-8:- Waste stored for auction are labeled properly upon lot preparation. Form-9:- Issuance of safe certificate is being insured and not TREM card upon auction and lifting of waste material. Form-10:- Battery on reaching maturity is replaced regularly & released ones are auctioned regularly. Released Oils of transformers and compressors are stored in container in closed space and disposed regularly. DLS/SPJ- Form-3:-records for storage of negligible value waste jute and rubber gasket are not maintained and are disposed in incinerator which is operated at DLS/SPJ. Form- 8:-Waste stored for auction are labeled properly upon lot preparation. Form-9:-Issuance of sale certificate is being insured and not TREM card upon auction and lifting of waste material. Form-10:- hazardous material like batteries and released oils / Jubricants are regularly disposed through auction. Mechanical Workshop, Samastipur. no hazardous waste generated in Mechanical workshop, Samstipur. ECoR: In connection with proper storage, handling, disposal, maintaining records and filing of Returns etc., instructions have been issued to concerned officers of ECoR.	
		Up keep of records of sale, transfer, storage, recycling, utilization etc .of such waste	Form-3		
	1 8 2	Issuing Transport Emergency (TREM) Card for every sale/issue of hazardous waste	Form-9		
	1 9 1	Manifest System to track hazardous waste from thetime it leaves generator until it reaches the treatment / disposal site	Form 10		
	Audit examined the extent to which the prescribed rules for proper storage and disposalof hazardous waste were followed in selected 131 units (including 30 coaching depots) and following points emerged: - i. Proper storage and labelling of hazardous waste not done in 102 units, ii. Records for storage, utilization, not kept in 110 units, iii. Transport Emergency (TREM) Card				
			ECoR should ensure adherence of instructions issued to concerned units. ECoR should also ensure proper maintenance of records as per form prescribed under HWM rules in all units of ECoR.		

	<p>not issued for every sale/transfer of hazardous waste in 117 units,</p> <p>iv. The manifest system prescribed for tracking of hazardous waste till its disposal, not followed for each issue/sale of hazardous waste in 101 units.</p> <p style="text-align: center;"><i>(Annexure 3.3).</i></p> <p>Non-adherence to the prescribed rules as brought out above makes the whole system of monitoring mechanism grossly ineffective posing threat to the environment as well worker/staff engaged in these units. It also highlights a need for sensitization for ensuring compliance to the rules prescribed for handling hazardous waste.</p>	<p>NR: Of the 17 audited units of NR, 16 units have not submitted Form-3 and Form-9, while Form-8 was not submitted by 14 units and Form-10 was not submitted by 15 units.</p> <p>Record of hazardous waste generated at KIKW (namely empty paint containers) is maintained in Form 3 at KLKW. The waste is sent to JUDW Store Depot for further disposal to HSPCB authorized recyclers,</p> <p>In Rolling Stock workshop CB, hazardous waste generated like grease, transformer oil and scid batteries are sent to General Store/AMV for further disposal. All 3 waste items are labelled and records for their storage maintained by the concerned sections. All the disposal related records are being maintained and kept by General Store/AMV.</p> <p>At Diesel Shed/TKD storing of hazardous waste is done safely in closed steel drums and proper labelling is also done. Complete records for the sale, transfer storage, recycling, recovery, pre-processing, co-processing and utilization of HW including refused oil are available. Maintenance of data online and tracking of hazardous waste online will start immediately after getting authorization for handling hazardous and other wastes. At Diesel Shed/LDH, waste material is currently being stored and labeled in the</p>	<p>NR- Not acceptable as the mechanism for monitoring and for compliance was not created at DSL/SHED/TKD</p>
--	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------------------------

		<p>prescribed manner. The records for the same, i.e. Form-8 and Form-3 will be maintained latest by 10.11.2022. Form-9 and Form-10 will be issued/provided and record will be maintained from next transportation of waste from the unit.</p> <p>The waste generated from DEMU shed JUC is sent to JUDW for further disposal and records are maintained for the same.</p> <p>Hazardous waste from EMU Car Shed GZB like lubricants, transformer oil, grease, batteries, etc. are disposed off regularly to Dy. CMM/General Store Depot, SSB along with a few other used parts to Engg. department for re-using at track maintenance.</p> <p>Instructions have been issued to all concerned to ensure maintenance of records.</p> <p>NCR:</p> <p>Electric Loco Shed/Kanpur:- 1.Proper Storage and labeling of wastage in categorized manner along with record maintenance already done by Electric Loco shed, Kanpur as per prescribed rules for proper storage and disposal of hazardous waste. Storage of Hazardous waste at ELS/CNB is being done in prescribed scrap bins and is being being disposed off regularly thorough work contract for disposal of waste. 2.For disposal : Current contract for disposal of hazardous , A contract has been awarded to firm on 02.04.2022 to M/s Bharat Oil</p>	
--	--	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--

		<p>and Waste Management Ltd., Kanpur (LOA No-230- Elect/ELS/ CNB/ WC/2021-22/Q-04/Hazardous Solid Waste) who have authorization certificate No.1486/UPPCB/GZB/UPPCBBO)/HW M/ GZB/2018 valid upto 01-04-2023. Vide above contract, Electric Loco shed, Kanpur has planned to dispose Qty 4000 kgs Solid waste & Qty 20000 kgs rubber waste item. Out of which 11500 kgs Rubber items wastage has been disposed till 19.07.2022 Contract validated upto 01.04.2023.</p> <p>3. Proper sanitization during handling of hazardous waste for storage is carried out by this shed.</p> <p>NER: Hazardous waste i.e. old batteries are sent to Stores Deptt. through DS-8 and it is disposed by Stores Deptt.</p> <p>NWR: Records for storage and disposal of hazardous waste are being maintained by Diesel Shed-BGKT, ABR, and Workshops over NWR. However instructions have been given for proper record keeping. . DEMU Shed –MTD-This will be compiled after recognition from SPCB.</p> <p>NFR: At New Bongaigaon, Form 3 complied. Used batteries are sold only to registered</p>	<p>NER- Hazardous waste are sent to Stores Deptt. through DS-8 and it is disposed by Stores Deptt. However, during the process, necessary prescribed forms are still being filled by the Railway Administration.</p> <p>NWR- Records for storage and disposal of hazardous waste are being maintained by Diesel Shed BGKT, however, were not maintained by Loco Workshop AII and Workshop JU</p> <p>NFR- New Bongaigaon: Forms No: 8, 3, 9 and 10 were not maintained.</p>
--	--	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

		<p>authorized recyclers by e- auction to firms having authorization for recycling/refining of hazardous waste. Form 8 complied. Scrap batteries are kept under the roof of scrap-yard of NBQ stores depot inside the scrap go-down for the purpose of disposal as per extant rules and no batteries are kept in open at New Bongaigaon. At New Bongaigaon, Form 9 not complied at present and will be processed.</p> <p>At New Bongaigaon, Form 10, the manifest system for each sale/issue of hazardous waste is not complied. Vide application dated 30-10-2021, it has been submitted to SPCB.</p> <p>SR: Now, the Form nos. 8, Form-3, Form 9, Form-10 are being maintained by the authorities of Carriage &Wagon Workshop / Perambur. Hazardous Waste are not maintained in respect of EWS/Arakkonam. The fabrication activities carried out at EWS/Arakkonam does not generate any Hazardous Waste and hence, the aforesaid forms are not applicable to EWS/ Arakkonam. S&T Workshop/Podanur: After labeling, the hazardous waste namely Cyanide, Neutralized chemical sludge is kept in sealed gunny bags and stored in safe custody and the bakelite</p>	
--	--	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--

		<p>moulding scrap is kept under the shed. The details of ETP system maintained by CMS/CMT/LAB of this workshop.</p> <p>Storage of hazardous waste is being done as per the extant norms in most secured manner after labelling. So far two times disposal (including transport) were made by this unit through TNPCB prescribed agency. Form-10 was obtained while disposing of 3.88 of Cyanide Neutralized chemical sludge and 16.35 of Bakelite moulding scrap. Now 33 of Bakelite moulding scrap was disposed on 27/12/2021. Form 3 and 9 will be followed in future.</p> <p>SCR: Both the coaching depots i.e. Secunderabad and Vijaywada have been advised to maintain concerned forms under Hazardous Waste Management Rules and to adhere them strictly.</p> <p>SER: GSD/KGP: Form-3- Annual returns of e- Waste & Form-4- Annual returns of Hazardous Waste for 2020-21 had been submitted to SPCB. All the senders of Hazardous waste and other wastes have been intimated to comply the form-8 and Form-9 during the dispatch of waste to scrap yard along with necessary DS8. Form-10 Maintaining of manifest under</p>	
--	--	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--

		<p>the prescribed form is strictly being continued and submitted to SPCB regularly.</p> <p>AMM/RNC: No scrap depot at RNC. Scraps are sold "as in where is basis". No E- waste is generated at this depot.</p> <p>SECR:</p> <p>The hazardous wastes like drained oil, used transformer oil, batteries copper cables etc. are not being disposed by Electric Loco shed and MEMU shed rather the same being handed over to GSD/R for disposal. Thus records for storage and disposal of hazardous waste are not being maintained. However data of no. of released battery generated, waste oil generated and handed over to GSD/R is available with the sheds.</p> <p>Form 8 is being maintained by Workshops (MIBW and WRS/R) and Diesel Loco Sheds (Raipur and Motibagh, Nagpur).</p> <p>Disposal of hazardous waste generated by workshops and diesel sheds is done through GSD/Raipur and GSD/Motibagh. The General Store Depots (GSD) are located within 2 km from the source of storage at workshop and diesel loco sheds. Hence, at present, TREM card is not being issued and maintained. However, workshops and diesel loco sheds have been advised to issue TREM card for the disposal of hazardous waste.</p> <p>SWR:</p>	
--	--	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--

		<p>CWM/MYSS</p> <ol style="list-style-type: none"> 1. Hazardous waste is stored in a separate, isolated storage room with labeling as per Form-8. 2. TREM cards are issued to the transporter while shifting the hazardous waste from the occupier establishment to the disposal facility. 3. Form No-10 (Manifest-1O) also complied. Now KSPCB is implementing E-Manifest. <p>WR:</p> <p>Form 8 – Parel workshop is storing hazardous waste in gunny bags and yellow tags are being placed at each bag. Dahod workshop also has been advised to use the similar tags. No policy guidelines are available for EMU & MEMU Car Shed. Negligible Solid Waste is generated in Coaching Depots.</p> <p>Form-3: Yes maintained. All waste which are reused/transfer, recycle are being handed over to nominated store for further disposal as per norms. ETP sludge and other non-saleable hazardous waste disposal through SPCB approved agency is under process. No policy guidelines are available for EMU & MEMU Car Shed. Negligible Solid Waste is generated in Coaching Depots.</p> <p>Form-9: Parel Workshop: As per MPCB requirements, Form 4, Form 10 9 and Form 13 are being filled up and issued regularly. It will be ensured to fill up and</p>	
--	--	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--

		<p>issue Form 9 also.</p> <p>Dahod workshop: Yes, these waste being transported internally up to associated store as per form 9 & store being dispose off as per norms. Balance ETP and other hazardous waste under process will be taken care at the time of transportation, EMU Car shed MMCT & VR: Authorization from the SPCB is yet to be obtained; however hazardous and other wastes generated wastes are stored in proper manner before being disposed off or transported to Mahalakshmi Stores Depot for further action. MEMU Car shed BRC: Authorization.</p> <p>MEMU Car Shed BRC: Authorization from the SPCB is yet to be obtained, however hazardous and other wastes generated wastes are stored in proper manner and are being de-asset to Pratapnagar workshop for further action. Negligible Solid Waste generated in Coaching Depots.</p> <p>Form-10: Parel Workshop has followed all MPCB guidelines pertaining. Form 10 manifest (as a generator) have been filled as per MPCB norms for every delivery (online). Manifest form 10 has been maintained on-line as below 09.03.2021 07.04.2021 12.08.2021 07.10.2021, 01.03.2022 Note-Before 09/03/2021 form 13 was given as per MPCB norms Dahod workshop is advised to ensure strict compliance of this instruction. EMU Carshed MMCT & VR: Authorisation</p>	<p>WCR- No specific comments given for non-maintenance of required forms for hazardous waste in the</p>
--	--	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------

		<p>from the SPCB is yet to be obtained, however hazardous and other wastes generated wastes are stored in proper manner before being disposed off or transported to Mahalakshmi Stores Depot for further action. MEMU Carshed BRC: Authorisation from the SPCB is yet to be obtained, however hazardous and other wastes generated wastes are stored in proper manner and are being de-asset to Pratapnagar workshop for further action. Negligible Solid Waste is generated in Coaching Depots.</p> <p>WCR: PCEE/WCR:- TKD: In ELS/TKD storage of hazardous waste is not done. It is sent to kota workshop for disposal from time to time for that records are maintained. NKJ: As in prescribed format disposal of generated waste is being done by Sr. DMM/JBP through online auction in regular basis. The generated waste has been sold to those firms which are authorized by CPCB for handling of waste. ET: No such records being maintained in ELS/ET Henceforth, proper accountal will be maintained.</p>	<p>workshops, sheds & coaching depots pointed out by audit. However, they have stated for proper accountal in future.</p> <p><i>It is evident from the facts verified by Zonal Audit offices, as above, that proper maintenance of forms and records as required under Hazardous waste Management Rules has still not been ensured in many workshops/sheds. Measures taken by MoR to rectify the situation may be furnished.</i></p>
3.6	<p>Storage of hazardous waste beyond the permissible period</p> <p>Rule 8 (1) of Hazardous and other Wastes (Management, and Trans-boundary</p>	<p>BLW: It informed that the waste oil lying in scrap depot for more than 90 days (permissible limit as per statutory provisions) due to non execution of BLW's ontract agreement by M/s Bharat Oil & Waste</p>	

	<p>Movement) Rules, 2016 (HWM Rules), prescribes that the occupiers of facilities may store the hazardous and other wastes for a period not exceeding ninety (90) days. State Pollution Control Boards (SPCBs) may extend the said period of 90 days to 180 days in some specified cases. Review of related records in the units selected revealed the following: -</p> <p>i. Storage period of hazardous waste⁵² was in excess of the prescribed period of ninety days in 36 units .The actual storage period of hazardous waste ranged from 3 to 6 months in 6 units, more than 6 to 12 months in 12 units, more than 12 to 24 months in six units and 24 months & beyond in 12 units .</p> <p>(ii) In some of the units⁵³ the storage period was found as long as 8 to 9 years or even more. Records did not indicate as to the permission from SPCB for storage of such waste was sought beyond the permissible limit.</p> <p>As timely disposal of hazardous waste is must for its proper management and also for preventing the danger likely to be caused by it to persons or environment, the action of Railway units storing such waste</p>	<p>Management Ltd/Kanpur (Agency authorised by State Pollution Control Board for disposing off the hazardous wastes) in spite of repeated follow ups with the firm. Subsequently, the waste oil has been disposed off through auction sale. It has been ensured that the waste oil will not be stored beyond 90 days and same will be disposed off within the permissible storage period of 90 days for all future arisings.</p> <p>WR: Lower Parel Workshop: Hazardous Waste quantity generated and accumulated over a specified period is sometimes inadequate so as to load and transport to disposal facility. This was happened exceptionally in 1-2 cases in the past. Accumulated hazardous waste is stored at nominated safe and isolated place. Disposal within stipulated storage period will be ensured. EMU Car shed MMCT Released oil is collected and handed over to other Dept on demand. The Account of released oil is maintained in the Tally Book of concerned section. During service, these oils are tested on blotting paper and if any abnormality found in this test, then the oil sample is tested in laboratory to ascertain metal content. Further, the released oil also sent laboratory for PQ analysis.</p> <p>EMU Car shed VR: For the disposal of waste lubricant material such as oil and</p>	<p>Comments on Storage of Hazardous waste beyond permissible time at four units (Mechanical Workshop, Lower Parel, Loco Carriage and Wagon Workshop Dahod, Diesel Loco shed, Vatva and Electric Loco shed, Vadodara (pertaining to western railway) and Diesel loco shed/NKJ, Electric loco shed/NKJ & Coaching depot/Jabalpur (pertaining to west central railway) may be furnished.</p>
--	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

	<p>for a long period makes the prescribed statutory provisions ineffective. With such prolonged storage, there remained potential threat causing adverse impact to the environment.</p> <p>-----</p> <p>⁵² <i>like waste oil, oil sludge, ETP sludge, paint sludge, used filters, cotton waste mixed with grease/ lubricants etc.</i></p>	<p>grease are being sent to Mahalakshmi Stores Depot for proper of the same. MEMU Car shed.</p> <p>BRC: The used grease is sent to Pratapnagar store depot for further action.</p>	
--	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--

<p>3.7</p>	<p>Integrated Management System (IMS)/ Green Rating Certification</p> <p>In terms of Railway Board's directives⁵⁴ (June 2015), Zonal Railways are required to put in place a system for Management of quality of environment through Integrated Management System (IMS) addressing the ISO 9001 for Quality, ISO 14001 for Environment Management System (EMS) and ISO 18001 for Occupational Health & Safety (OHSAS). Zonal Railways were asked to take immediate necessary action to obtain IMS certification for all the PUs/ Workshops as also for loco sheds and major coaching depots including EMU/DEMU car sheds. Later in February 2017, Zonal Railways were instructed⁵⁵ to undertake Green Rating Certification of Railway Establishments covering the assessment of parameters on energy conservation measures, use of renewables, water recycling/rain water harvesting, waste management (solid & liquids) and its disposal.</p> <p>Review of records of selected Railway workshops, sheds, Production units and coaching depots (131 units) revealed that</p>	<p>ECR: Electric Loco Shed/ GOMOH has obtained ISO 14001:2015 for Environment Management System & ISO 9001:2015 for Quality in 2020.</p> <p>► DEMU SHED SONPUR following certifications are under process of obtaining IMS: Certification- ISO:9001:2015(QMS), ISO:14001:2015(EMS) & ISO:45001:2018(OHSAS) Mechanical Workshop /SPJ- is certified with IMS based ISO 9001, ISO 14001 & ISO 45001(previous OHSAS 18001) and also under process for getting Green rating certification.</p> <p>ECoR: IMS/ISO accreditations have been done for 40 units in ECoR. Similarly, Green-co Certification has been obtained for DLS/VSKP and CRW/MCS. IGBC Platinum accreditation of VSKP station on 31-08-20.</p> <p>NR: Of the 43 units where IMS/Green rating has not been obtained, only 1 unit pertains to NR, viz, EMU Car Shed, GZB.</p>	<p>ECoR- During Audit, it was noticed that ELS/Angul had applied for IMS/Green Rating Certification on 24.10.2019 and MEMU Shed/ Khurda Road had not planned for obtaining IMS/Green Rating Certification as of January 2021.</p> <p>However, the ATN is silent on status of obtaining Green Rating Certification of both units. The status may be supplemented to Audit</p>
------------	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

	<p>certification under Integrated Management System (IMS) or Green Rating was obtained in respect of 88 units only (67 <i>per cent</i>).</p> <p>Thus, the system for Quality Management of environmental issues was not fully established even after five years of issue of instructions in this regard. Further, based on the study got done by Ministry of Railways through Quality Council of India (QCI) in 2019 it was also observed that ISO certification and Green rating was obtained by only 10 and two <i>per cent</i> of the stations, respectively.</p> <hr/> <p>⁵³ <i>Signal workshop/Howrah, BLW/Varanasi, Loco carriage and wagon workshop/ Dahod</i> ⁵⁴ <i>letter No. 2015/E&HM/03/02 dated 11.06.2015,</i> ⁵⁵ <i>letter No. 2015/EnHM/12/02 dated 01.02.2017</i></p>	<p>To obtain the IMS certification, a solar power plant and APFC panels having capacity of 90 KVAR have been installed in EMU Shed, GZB. Proposal for a Rain Water Harvesting plant is also being initiated.</p> <p>Also, LOA for Green-Co certification at EMU Car Shed/GZB has been issued to the firm M/s De-Calorie Energy Consultant LLP, Jaipur on 18.10.2022.</p> <p>NCR: ELECTRIC LOCO SHED/KANPUR:- ELS/CNB has obtained certification for the same during the period 02/09/2016 to 01/09/2019. For further ELS/CNB has initiated process for obtaining ISO certification. In this process, the proposal has been vetted by Divl. Finance / PRYJ on 13.09.2022. The open tender will be floated soon.</p> <p>NER: Kathgodam Coaching depot has obtained IMS Certificate (ISO9001:2015, ISO14001:2015, ISO45001:2018), valid from 21/1/2022 to 20/01/2025. GKP Workshop has been certified Green-Co GOLD certification on 15.7.22. IMS certification for IZN Mechanical Workshop has been obtained and is valid upto 29.12.24. ISO 50001 has also been obtained and is valid upto 10.11.24. Implementation of IMS was outsourced to a Mumbai based Firm via Outsourcing at</p>	<p>NWR- DEMU Shed MTD has not obtained IMS/Green rating certification.</p>
--	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------

		<p>Loco Shed Gonda. Now the Shed is mainly involved in maintaining Electric Locomotives (negligible hazardous waste generation) therefore this work has not been proposed for renewal.</p> <p>NWR: IMS certification and Green rating certification has been achieved by all workshops over NWR. Apart from this, 09 other units have also achieved the Green rating certification.</p> <p>NFR: The process for obtaining ISO 9001 & ISO 14001 certification of Coaching Depot, DBRG is under progress and contract agreement has been issued on 17-12-2021 Further, Coaching Depot, APDJ is also an ISO certified unit having obtained ISO 9001, ISO 14001 & ISO 45001certificates. IMS/Green Rating Certification for C & W Workshop, New Bongaigaon was valid up to July 2021. Renewal of the same has already been processed and certification of IMS/Green Rating is likely to be completed shortly. For Diesel Shed Siliguri Jn. and Engineering Workshop, Bongaigaon, proposal for getting IMS/Green Rating Certification is under consideration.</p>	<p>NFR- (a) Coaching Depot, DBRG: Certification under IMS ISO 9001:2015, ISO: 14001:2015 and ISO: 45001:2018 was obtained.</p> <p>(b) Coaching Depot, APDJ: No records submitted.</p> <p>(c) C&W Workshop, NBQ: Certification under ISO 9001, ISO 14001 and ISO 45001 was obtained and valid upto Feb/2023, Tender for recertification was in process.</p> <p>(d) Diesel Shed, Siliguri: Certification under ISO: 9001:2015, ISO: 14001:2015 and ISO: 50001:2011 was done.</p> <p>(e) EWS, Bongaigaon: No Certificate obtained.</p>
--	--	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

		<p>SR:</p> <p>Carriage & Wagon Workshop /Perambur: This unit is IMS certified workshop which has also obtained silver rating under Green rating certification in the year 2021.</p> <p>Loco Works Perambur: This unit has also been awarded the IMS Certificate comprising of ISO 9001:2015, ISO 14001:2015 & ISO 45001:2018 by M/s.Quest Certifications Pvt. Ltd., Chennai on 29- 05-2019 and valid up to May-2022. Of Further, Loco Works has been Certified with "GreenCo Bronze" by er M/s CII on 12-08-2021 and valid up to ce August-2024.</p> <p>Golden Rock Workshop: This workshop has obtained recertification for IMS system covering ISO 9001, ISO 14001 and OHSAS 18001 (ISO 45001) on 08-03-2021 and the certificate is valid upto 07- 03- 2024.</p> <p>GOC shop has been certified for Platinum rating during Dec 2021 under CII Greenco rating system prescribed by Railway Board.</p> <p>It is stated that the contract awarded on 30.04.2021 Management System (IMS) at EWS/Arakkonam was terminated since the contractor has failed to execute the work. (Enclosed as Proof-4). The Re-Tender for implementation of Integrated Management System (IMS) Certification for EWS/Arakkonam is under process. Hence, the proposal for Green Rating Certification will be initiated after</p>	
--	--	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--

		<p>Successful implementation of IMS at EWS/Arakkonam.</p> <p>S&T Workshop/Podanur: S&T Workshop/PTJ got IMS certification on 28/07/2021 which cover all five ISO certificates i.e. ISO 9001: 2015 for QMS, ISO 14001: 2015 for EMS, ISO 45001 : 2018 for OHSAS, ISO 50001 : 2018 for EnMS & ISO 22000: 2018 for FSMS standards. Certification for Green Rating pertaining to S&T/WS/PTJ is under progress.</p> <p>SER: KGP Mechanical Workshop & Supervisors' Training Centre have obtained Green Certification. Engineering Workshop/Sini, Coaching Depot/Santragachi and Coaching Depot/Hatia had planned and undertaken IMS/Green Rating Certification. Conditions prescribed by the certification agency and required criteria for certifications have been fulfilled. Electric Loco Shed/Santragachi planned for certification but could not undertake IMS/Green Rating Certification of the unit.</p> <p>S&T WS/KGP: At present no plan for undertaking IMS/ Green certification EMU Shed/ Tikiapara: Planned to re-process tender once the availability of fund is ensured.</p>	<p>WCR- Railway administration has not furnished any specific comments for non-obtaining of IMS/Green rating certification for Electric loco</p>
--	--	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------------------------------------------------------------

		<p>DLS KGP: At present fresh renewal of IMS has not been initiated.</p> <p>SECR: IMS certification has been obtained by WRS/Raipur, rMIBW/Nagpur, Coaching Depot/Bilaspur. ISO certification (ISO-9001, ISO-14001 & ISO-18001) have V been obtained independently by ELS/Bhilai, MEMU Shed/Bhilal & DLS/Raipur.</p> <p>WR: PL workshop has been certified in IMS (ISO 9001: 2015, ISO 14001: 2015 & ISO 45001: 2018) on 25.06.2022, valid upto 10.02.2025. Also the work of greenco certification renewal has been awarded and certification is planned in Nov 2022.</p> <p>WCR: TKD: ISO 9001 for Quality ISO 14001 for environment management system (EMS) ISO 45001 for occupational health and safety. Their Renewal process is in progress. NKJ: Shed had apply for IMS certification & it is under for tendering process ET: Shed is ISO 9001, 14001 and 18001 certified. IMS certification awarded to PWS/BPL and WRS/KOTA.</p> <p>BLW: The Green-co-rating (year 2017-2020) was awarded by CII-SGGBC in March</p>	<p>shed/NKJ.</p> <p>RPU & Metro- CLW- IMS certificate and Green rating certificate was obtained on 12.02.2021 and February 2023 with validity of 11.02.2024 and February 2026 respectively BLW-The Green Co-rating is presently under process of finance concurrence. The certification work is likely to be completed within six month.</p>
--	--	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

		<p>2017 with validity upto March 2020. The new proposal for re-certification is under process by Safety department.</p> <p>RCF: RCF has obtained ISO-14001: 2015 certification for environment management system this is valid upto 29.07.2024.</p> <p>CLW: ISO 45001: 2018 ISO 14001:2015 & ISO 9001:2015 Date of issue: 12/02/2021 Date of Expiry: 11/02/2024</p> <p>MCF: Integrated Management system & ISO System addressing ISO 9001:2015 for quality, ISO 1400:2015 (EMS) for environment management system & ISO 45001:2018 (new version of 18001) for occupational health & safety (OHSAS) has been implemented in MCF. Modern Coach Factory is already Green Co certified.</p>	<p><i>MoR have taken steps for IMS/Green rating certification of many workshops/ sheds, however, no reply has been furnished for many wanting units as verified by Audit above. Moreover, no reply has been furnished for regarding ISO certification and Green rating of stations as pointed out in the Audit Report.</i></p>
3.8	<p>Conclusion Maintenance, repair and production activities in the railway units generate heavy quantum of solid waste and the waste water causing serious concern to the environment. Water Act and procedure</p>	<p>Noted for compliance please. Indian Railways continuously endeavoring for effective management of environmental issues to achieve greener and cleaner surroundings around us. However, it is pertinent to mention that IR has developed a GreenCo Rating system with IGBC-CII, and 57 units including 07 PUs, 41 workshops, 8 loco sheds 01 store depots</p>	<p><i>MoR have noted the conclusions for compliance, however effective steps are required to be taken for obtaining CTE/CFO & authorization, its timely renewal, adherence to the prescribed Rules for storage & disposal of hazardous & other waste and setting</i></p>

	<p>framed by CPCB/SPCBs specified various provisions to address this aspect. Test check in audit revealed that a large number of such units were operating without obtaining CTE/CFOs despite clear directives of NGT.</p> <p>Prescribed regulations related to hazardous waste management were not complied with. Besides, there have been cases of delays obtaining authorization from SPCBs for handling hazardous waste and effluents.</p> <p>System/procedure prescribed for storage, transportation and disposal of hazardous waste were not followed in its true spirit. There were cases of hazardous waste found to be stored beyond the permissible limit.</p> <p style="text-align: center;">Summary of Audit findings</p> <ul style="list-style-type: none"> Indian Railways failed to ensure compliance on the basic requirement of obtaining requisite approvals (CTE/CFO) from the designated authority. Due to slow progress on planning and installation of ETPs/STPs, the system of managing waste viz., 	<p>and .have achieved such GreenCo rating out of whcih 02 units have achieved Platinum rating and 16 have achieved gold rating.</p>	<p><i>up of ETP/STPs.</i></p>
--	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------------------------------	-------------------------------

	<p>effluents, pollutants and hazardous wastes discharged in the environment by various maintenance and production units was deficient with reference to the provisions contained in Water Act and Hazardous waste management Rules.</p>		
3.9	<p>Recommendation</p> <p><i>IR needs to ensure provision of required infrastructure and initiate measures to sensitise the work force engaged in maintenance and Production Units for effective compliance of the Hazardous Waste Management Rules thereby avoiding danger to health and environment as well.</i></p>	<p>Noted please for compliance. No comments please.</p>	<p>No further comments to offer.</p>
<p>Chapter 4 Management of waste water generated at railway stations, coaching depots, workshops and production units</p>			

	<p style="text-align: center;"><i>Audit objective 3</i></p> <p><i>Whether management of waste water generated through effluent/sewage treatment, water recycling and reduction</i></p> <p>Indian Railway has created vast infrastructure of stations, coaching depots, workshops, maintenance sheds and production units (PUs) for managing the volume of passenger and freight traffic. The activities related to operation of traffic at stations and maintenance of rolling stock not only requires extensive use of water, but also generates huge quantity of waste water.</p> <p>For better management of fresh as well as waste water, Railways aims to follow the policy of ‘Reduce’, ‘Reuse’ and ‘Recycle’. This aspect is prominently placed in the Indian railways Water Policy, 2017 that <i>inter alia</i> lays emphasis on judicious use of water as it is becoming a scarce commodity by each passing day.</p> <p>For reduction in water usage, as also for managing the waste water, provision of Effluent/Sewage Treatments Plant</p>	Noted please.	
--	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	---------------	--

	<p>(ETPs/STPs), Water Recycling Plants (WRPs) and Automatic Coach Washing Plants (ACWPs) is to be made by Railway Administration as per Water Policy, 2017. Central Pollution Control Board (CPCB) also directed (2 June 2020) that all the Zones should take steps to manage waste water as also to identify quality of sewage and non-sewage waste water separately and plan waste water recycling plants accordingly.</p> <p>The efficacy and efficiency of the efforts made by IR for managing waste water at stations, coaching depots, workshops, maintenance sheds and production units were assessed and the deficiencies noticed are discussed in the succeeding paragraphs.</p>		
--	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--	--

<p>4.1</p> <p>Provision/Plan ning, Commissioning and functioning of effluent/sewage treatment plants (ETPs/STPs)</p>	<p>As prescribed in Section 24 of the Water (Prevention and control of Pollution) Act, 1974, no person shall knowingly cause or permit flow of any poisonous, noxious or polluting matter into any stream, well, sewer and land without treating it. The activities in workshops, sheds and production units generate effluent such as waste oil, chemicals, sludge, waste grease etc.</p> <p>As per the special condition attached to Consent for Operation (CFO) under the Water Act, provision of effluent treatment plants (ETPs) is necessary for treatment of effluents before discharging into sewer/waste bodies. Similarly, for treatment of effluents generated at railway stations and coaching depots, Railway Board, instructed⁵⁶ Zonal Railways to formulate proposals, wherever considered economically desirable for setting up ETPs considering the economic, social and environment consideration. The National Green Tribunal (NGT), in its order dated 18 March 2015 asked railway authorities to ensure that effluents generated at stations and coaching depots/ yards doesnot get seeped into the ground water and such</p>	<p>CR: In CR among coaching depots/workshops/sheds, ETPs/STPs are not functioning at 05 coaching depots & 03 workshops.</p> <p>ER: ETP/STP/WRP is available and functioning at major stations of ER. (HWH, SDAH, KOAA, ASN, MLD) under installation at BGP, under process at DGR). ETPs are available in all three Workshops and all three Diesel sheds.</p> <p>ECR: WRP has been installed at RNCC, DNR, DHN, BJU & DBG depot. Due to very less discharge of effluent, WRP is not feasible at SEE & HJP stations. 2. WRP installed at RNCC, DNR & DHN depot are being planned to channelize with RJPB, DNR and DHN stations. Installation of WRP is under process at MFP.</p> <p>ECoR: CRW/MCS has 03 ETPs in operation with total capacity 40KLD and WRWS/VDPD has 02 STPs with total capacity 150KLD in operation. The treated water is being utilized for cleaning, washing & gardening purposes.</p>	<p>ER- From MoR's reply, it is evident that only 5 out of 43 major stations in Eastern Railway were having ETPs so far. Further, none of the electric loco sheds, EMU car sheds and coaching yards (except Tikiapara) was having any ETP. Railway has not fixed any timeline also for provision of ETPs in major stations, sheds and yards in violation of RB's instruction of April 2015.</p> <p>ECoR- The ATN is silent on installation of ETP at ELS/Angul, which was planned in 2018-19 but has not been sanctioned till March 2021. Further, although the STP work at Visakhapatnam Railway Station was shown as physically completed in June 2020, it had not been activated till March 2021.</p>
--------------------------------------------------------------------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

	<p>effluents should be channelized to ETPs/STPs located near all major stations. In compliance with these orders, Railway Board instructed⁵⁷ (30 April 2015) the Zonal Railways to prepare a time bound action plan for setting up ETPs/STPs near the major stations.</p> <p>Audit examined the efficacy of steps taken for provision of ETP/STP at selected 102 major stations, 30 coaching depots and 101 workshop/shed/Production units and observed the following shortcomings: -</p> <ol style="list-style-type: none"> ETP/STP though planned but were not commissioned in 40 workshops/sheds and 19 coaching depots. ETPs/STPs commissioned on 87 stations were not functioning as of March 2020. <p>From the position given above, it can be inferred that statutory requirement of treatment of waste water before its discharge could not be effectively fulfilled as installation of the ETPs/STPs fell short of that planned and many of the installed ETPs/STPs remaining non-functional. Records made available did not indicate fund shortage preventing the installation of ETPs/STPs (part of environment related</p>	<p>NR:</p> <p>Out of 40 Workshops/Sheds and 19 Coaching Depots, 2 Sheds (EMU Car Shed GZB and DEMU Shed JUC) and 3 coaching depots (HNZM, DEE & ASR) belong to NR.</p> <p>Major consumption of water in Sheds and s Coaching Depots is in washing of coaches. Manual washing of coaches is being replaced with automatic washing through ACWPS. ETPs are being provided with ACWPS to treat the effluents and recycle the water again for washing coaches. ACWPS along with ETPs have already been provided at HNZM, ASR and DEE coaching depots. For Sheds, one ACWP at DEMU Shed JUC and one ACWP at EMU Car shed GZB have been sanctioned under Umbrella Works.</p> <p>Out of the audited 102 major stations, 10 stations (BSB, RBL, MB, NDLS, PNP, ROK, d BBK, RPJ, SVDK & JRC) belong to NR. ts Details of these stations are as follows:</p> <p>NDLS- A 250 KLD WRP was installed and commissioned on 30.06.2020 and is working at Rajdhani complex NDLS; A 250 KLD WRP has been installed at DLT</p>	<p>The present status of setting up of ETP/STPs at ELS/ANGL and VSKP may be supplemented</p>
--	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------

	<p>works). Para 4.5 has a mention of funds for environment related works remaining unutilised due to slow progress on such works. The environment concerns of contamination of ground water/water bodies as well as reduction in use of fresh water consequently remained unaddressed. However, it was observed that ETPs/STPs were provided in all Production Units test checked and the same were found in working condition.</p> <p>⁵⁶letter no. 99/LMB/9/25 dated 22-12-1999</p> <p>⁵⁷ letter No. 2015/Environ/01/03 dated 30.04.2015</p>	<p>area and is working; 3 other WRP of total capacity 450 KLD are under process- 200 KLD-Thomson road, 200 KLD-Parcel complex, 50 KLD-Shatabdi Complex. SVDK - ETP of 70 KLD capacity is installed and is working at SVDK washing line; A WRP of capacity 50 KLD is also planned.</p> <p>BSB-20 KLD ETP at Line washing plant at Varanasi is functioning. Also, an STP of 500 KLD capacity based on Portable Magnetised Treatment Reactor (PMTR) has been commissioned by RVNL at BSB and is working.</p> <p>At JRC one ETP of capacity 50 KLD has been sanctioned under Planhead 53 Umbrella Works.</p> <p>At MB, Rs. 1.93 cr have been allotted under divisional ERW funds for installation of a WRP at the station.</p> <p>At PNP, ROK and RBL, ETP/STP/WRP of 250 KLD each have been included under Planhead 53 Umbrella Work, "Installation of waste water treatment & recycling plant/ effluent treatment plants on 13 stations in Haryana"</p> <p>At RJP and BBK, ETP/STP/WRP are not required. At RPJ, gross water consumption is less and there is no scope for recycling of water/ effluent/ sewage as it is using the Municipality sewer line. At BBK, there is low generation of wastewater.</p>	<p>NCR:-</p> <p>PRAYAGRAJ DIVISION:-Railway</p>
--	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	---------------------------------------------------------------

		<p>NCR: PRAYAGRAJ DIVISION:- Waste water discharge from PRYJ Railway Station is being treated by STP/ETP of Nagar Nigam and as per MOU between ministry of Railway and ministry of water resource river development and Ganga Rejuvenation conservation. On 03.12.2015, Prayagraj Railway Station is one of the stations which are identified for the use of non-potable water released after treatment from sewerage/effluent treatments located in Ganga and Yamuna River zones for railway purpose, so there is no need to install STP/ETP at PRYJ railway Stations.</p> <p>For waste water management following steps has been taken by PRYJ coaching depot:- Tender for Automatic Coach Washing Plant for PRYJ coaching Depot opened on 05.08.2022, under technical evaluation at COFMOW , after finalization of tender it shall be installed. Water recycling plant already installed at PRYJ coaching depot; its operation is being done for recycling of waste water of washing line of PRYJ coaching depot. Effluent Treatment Plant (ETP) has also been commissioned on 25.08.2022 at washing line of PRYJ coaching depot, waste water of mechanized laundry is being recycled for washing of coaches at washing line.</p> <p>Clear guidelines from zonal or central level for establishment of Effluent</p>	<p>reply is general in nature. However, Automatic Coach Washing Plant could not be installed at coaching depot PRYJ due to non-feasibility reason.</p> <p>.</p>
--	--	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------

		<p>treatment plants (ETP) /Sewage treatment plants(STP) need to be issued for Railway units. with provision of standard guidelines, proposals for setting up ETPs/STPs may be initiated by railway units like ELS/CNB.</p> <p>AGRA DIVISION: One 100 KLD STP has been installed on 20.01.2022 at Agra cantt station whereas one 50 KLD STP is under installation process at Agra Fort station.</p> <p>JHANSI DIVISION:- Two 50 KLD STP has been installed near JHS station whereas one 0.5 MLD WRP is working at GWL station.</p> <p>NER:</p> <p>1. Automatic Coach Washing Plants (ACWPS) at GTNR depot is under process.</p> <p>2. WRP has been installed at New and Old coaching GKP depot, ASH depot and CPR and BSBS coaching depot. Work is under progress for installation of WRP at LJN & GKP stations.</p> <p>NFR:</p> <p>ETP/STP is functional at Katihar, Guwahati and Agartala. For all 26 NGT nominated stations, providing ETP/STP according to the nature and quantum of waste water arising, ranging from 10 KLD to 240 KLD have been sanctioned and is in various stages of procurement/installation.</p>	<p>NFR- (a) ETP was provided in Diesel Loco Shed/SGUJ and in functional stage.</p> <p>(b) Rangiya Division: ETP/STP sanctioned in 03 NGT nominated Stations - NBQ, RNY and BPRD Stations - but not installed.</p> <p>(c) Katihar Division: ETP/STP sanctioned in 09 NGT nominated Stations but installed only in Katihar Jn. For the other 08 Stations (NJP, BOE, JBN, KNE, PRNA, SGUJ, ARQ, RGT), P.O. was issued.</p> <p>(d) Alipurduar Division: Work for setup of STP in 05 NGT nominated Stations (APDJ, NCB, NOQ, DQG and KOJ) in progress.</p> <p>(e) Tinsukia Division: ETP/STP proposed for 04 Stations (NTSK, DBRG, MXN & DBRT) in progress.</p>
--	--	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

		<p>As far as ETP for DBRG Coaching Depot is concerned, waste water generated are planned to be processed through the ETP which is coming up at Dibrugarh station situated adjacent to Depot.</p> <p>ETP/STPS with suitable capacities are already in operation at Diesel Sheds, Siliguri Jn. and DEMU Shed, Siliguri Jn..</p> <p>As for as EWS, Bongaigaon, on observing the generation of effluent water ETP will be processed.</p> <p>The waste water is processed through various stages in the STP/ETP as per the set standards and accordingly the treated water discharged is used for coach washing. station gardening apron cleaning, and miscellaneous requirements.</p> <p>NWR:</p> <p>ETPs are functional at all workshop and Diesel shed BGKT, ABR One more STP has been sanctioned in the year 2022-23 at JU Workshop.</p> <p>ETPs with ACWP at MD,JU, BME, BKN, SGNR. Coaching depot and in laundry at UDZ,SGNR and JP are functional.</p> <p>STPs have also been provided at JP,JU,HSR,BNW SOG stations and sanctioned for HMH and LGH stations.</p> <p>SCR:</p> <p>Seven nos. of STPs are available /functioning on SCR at various locations.</p>	<p>(f) ETP/STP in KIR, GHY & AGTL Stations were not functional.</p> <p>(g) No ETP/STP installed in EWS, Bongaigaon</p> <p>NWR- ETPs at Loco Workshop All, Diesel Shed BGKT, JU Workshop and DEMU Shed MTD were functional, hence, there are no further remarks to offer.</p> <p>The position in this regard was reviewed and it was found that the work of ACWP at Coaching Depot Jaipur is in progress, hence, Ministry of Railways remarks regarding Jaipur are not correct.</p> <p>The position in this regard was reviewed and it was found that STP has also been provided at BKN.</p> <p>SR- Reply of MoR is not accepted.</p>
--	--	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

		<p>25 more nos. of STPs are in different stages of progress at various stations of SCR.</p> <p>Ten Nos. of Effluent treatment Plants are available / functioning on SCR at various locations.</p> <p>Provision of one more Effluent Treatment Plant of 50 KLD is in progress at CRS/TPTY.</p> <p>SR:</p> <p>'Water Audit' has been conducted in all the 72 major Railway Stations of Southern Railway. Based on the 'Audit Report', the amount of Domestic and Non-Domestic consumption of Water including the Scope of Water that can be recycled was quantified and necessary rectifications based on recommendations for Water Conservation were executed. The y details of Waste Water Recycling Plants installed at Workshops, Railway e Stations and Coaching Depots of Southern Railway are given below:</p> <ol style="list-style-type: none"> 1. Coaching Depot/BBQ (1000 KLD) 2. Coaching Depot/GSN (220 KLD) 3. BG Coaching Depot/TPJ (200KLD) 4. Crawford Colony/TPJ (1200 KLD) 5. Coaching Depot/CBE (400 KLD) Coaching Depot/MAQ (250 KLD) 6. Karur Railway Station (50 KLD) 7. Coaching Depot/MDU (400 KLD) 8. Kottayam (200 KLD) 9. Coaching Depot/KCVL, Golden Rock Workshop, Tiruchchirappalli (3 ETPS 	<p>MoR has not provided any details in regard to the conduct of water audit and action taken on the recommendations thereon.</p> <p>The WRP at CD/BBQ is not functioning and is under revamping work for the past three years.</p> <p>No Water Recycling Plant is available at Crawford Railway Colony/TPJ.</p>
--	--	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

		<p>[Total Capacity: 350 KLD])</p> <p>10. Carriage and Wagon Works, Perambur (2 ETPS [Total Capacity: 240 KLD]).</p> <p>Further, Work is under Progress for Waste Water Recycling at the following units:</p> <ol style="list-style-type: none"> 1.Coaching Depot/TEN (300 KLD) 2.Coaching Depot/VM (100 KLD) 3.Coaching Depot/ERS (125 KLD) 4.Coaching Depot/TVC 5.Irumpanam Yard/TVC (175 KLD) 6.Coaching Depot/NCJ (500 KLD) 7. Tambaram (500 KLD) 8.Erode Station (100 KLD) 9.Mettupalayam Station (25 KLD) 10.Salem Station (50 KLD) 11.Tirupur Station (50 KLD) 12.Ernakulam Town (100 KLD) 13.Ernakulam Jn (400 KLD) 14.Carriage and Wagon/PER (200 KLD) <p>Also, proposal is under consideration for provision of STP at following locations:</p> <ol style="list-style-type: none"> 1. ERS (400 KLD) 2. ERN (100 KLD) 3. CLT (300 KLD), 4. PGT SRR, MAJN (400 KLD each) 5. Carriage and Wagon /Perambur: 200 KLD <p>It is also highlighted that the repairs to Sewage Treatment Plant (STP) at Crawford Colony, Tiruchchirappalli [Capacity: 1200 KLD] was conducted and is under working condition.</p> <p>SER: Details of SER as of now-</p>	
--	--	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--

		<p>As on date ETP/STP has been commissioned in 9 stations.</p> <ol style="list-style-type: none"> 1 ADRA- STP at Khosla Dam 2. BKSC-STP, 3. ROU-STP cum WRP 4. JSG-STP cum WRP 5. CKP-STP cum WRP, 6. DGHA-CTP, 7. RNC - ETP + Bio-toilet 8. HTE - ETP + Bio-toilet 9.SRC depot-ETP <p>ETP Under construction-3 [TATA, BLS & SHM)], WRP under construction- 2 (ADA, BQA) Under Process-1 (KGP) ETP not required-8 (BQA,VSU, PRR is being provided. JGM, MDN, MCA, BZN, PKU as Bio-toilet has already been provided) ETP exists in DLS/ KGP, DLS/ BNDM, DLS/ BKSC, KGPW. However, the Diesel loco sheds have been converted into Elec. Loco Sheds.</p> <p>SECR: STP/WRP is functional at Bilaspur covering Coaching Depot and Station complex. STP have been installed at Bilaspur, covering residential complexes (Near RTS Colony, Mailagadda and Tikrapara)</p> <p>STPs are under construction at 6 stations - Itwari, Shahdol, Kamptee, Ramtek, Rajnandgaon & Bhandara Road.</p>	<p>WR- Though Railway Administration has initiated corrective action where required, 100 percent progress in installation of STP/ETP may be ensured within a targeted time frame. Progress thereon may be apprised to Audit.</p>
--	--	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

		<p>ETPs are available at DLS/R & DLS/MIB, - Coaching Depots at Bilaspur and Durg.</p> <p>SWR: CWM/MYSS: ETP with 20 KLD capacities already Functioning in this workshop. STP facility is not provided as the sewage from the toilet is connected to Mysore City Corporation Drainage system thereby it is connected to State run STP at Vidyaranyapuram which is 2 km Away from this workshop.</p> <p>WR: 1). Coaching depots: ADI - Phytoremediation Plant has been commissioned at ADI. BDTS-ETP has been commissioned EMU Carshed, MMCT - ETP and STP are not available. However, ETP is covered in sanctioned work of Automatic Coach Washing Plant which is under installation (Civil work under progress). EMU carshed VR: ETP and STP are available and are operational. Treated water is being used for gardening purpose and generated sludge (very less in quantity) from the STP and ETP is being dried in drying bed. Dried sludge will be disposed off through agencies authorized by the pollution control board. MEMU Carshed BRC: MEMU Car Shed, BRCY having ACWP plant for external coach cleaning, this plant is having its</p>	<p>WCR- Railway Administration has not furnished any remarks about non- functioning of ETP/STP at 6 pointed out stations (Jabalpur, Katni, Pipariya, Kota, Sawai Madhopur & Hoshangabad) and 1 Coaching depot (Jabalpur).</p>
--	--	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

		<p>own water recycle unit. ETP plant for the treatment of drainage water in Shed and water coming out during internal coach cleaning.</p> <p>2) Mumbai Central, Bandra Terminus, Bilimora Jn, Valsad, Dahod- Mumbai central STP commissioned at on 29.12.21. Billimora & Valsad proposal submitted for sanction.</p> <p>Bharuch- STP plant commissioned on 14.07.2021</p> <p>Vadodara - Not installed due to non availability of space.</p> <p>Workshop- 03 ETPs have been missioned-</p> <ol style="list-style-type: none"> 1) RB shqg-05 KLD, 2) FTG II shop-30 KLD and 3) Common ETP-100 KLD <p>WCR:</p> <p>TKD: An ETP was installed in shed during 2012-13</p> <p>NKJ: Management of waste water: Not pertain to this shed.</p> <p>ET: Currently no ETP plant is installed in shed.</p> <p>WCR is making all out efforts to Reduce, Reuse and Recycle water at stations and various units of the railway.</p> <p>No. of WRP/ETP/STP-Total planned-48. Functional-27 out of 48 stations/locations.</p> <p>ACWP has been established at all three divisions Jabalpur, Bhopal/RKMP and Kota stations. ETP/STP planned at 34 stations/locations, functional at 18</p>	<p>RPU & Metro- CLW- Test Report of released water after treatment through STP was issued on Oct 22 by West Bengal Pollution Control Board (WBPCB).</p> <p>Metro Rail- In MR /Kol the contract has been awarded by COFMOW on 22.11.2022 for setting up of effluent treatment plants (ETPs) at Noapara Car depot complex.</p> <p><i>Measures taken by MoR to rectify the above may be furnished.</i></p>
--	--	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

		<p>stations/locations. For remaining stations work in progress.</p> <p>RCF: STPs in RCF have already been commissioned. Environment Statement for water consumption is being submitted to PPCB on monthly basis.</p> <p>MCF: Three no. of STP are functioning in MCF, Raebareli. The total capacity of STP is 2.6 MLD. An ETP with capacity 5 KL is in working condition.</p> <p>PLW: ETP & STP are fully functional for Industrial Waste.</p> <p>CLW: In CLW Sewage Treatment Plant (Activated sludge plant) having capacity 1.2 MGD to 4 MGD has been installed at the time of inception of the workshop and functioning till date with Grit Chamber, Primary Settlement Tank, Aeration Chamber, Secondary Settlement Tank, Consolidation well cum Pump House, Digestion Tank and Drying Bed.</p>	
<p>4.2</p> <p>Analysis of the effluents/sludge discharged from ETPs/STPs</p>	<p>In compliance with the provisions of the Water Act, 1974, the effluent discharged from railway stations, coaching depots, workshops, sheds and production units were to be treated in ETPs/STPs before its</p>	<p>CR: In CR, analysis of effluents/sludge discharged from ETPs/STPs provided at stations, coaching depots, workshops, sheds and production units is done in all Railway units except 05 units.</p> <p>ECoR:</p>	<p>Zone wise replies are as under:</p>

<p>provided at stations, coaching depots, workshops, sheds and production units.</p>	<p>discharge to municipal sewage lines or to low lying areas/land. As per the special conditions attached to consent for operation (CFO) under the Water Act, the effluent should conform to the prescribed standards; hence should be analysed before and after treatment in ETP/STP. The sludge from the ETP/STPs should be dried in sludge drying beds and testing of such dried sludge should be done to decide its disposal method. Such analysis/testing is prescribed to address the environmental concerns related to handling/disposal of such effluents and sludge.</p> <p>Examination of the efficacy of the process of handling/disposal of effluents/sludge in ETPs/STPs provided at railway stations, coaching depots, workshops, sheds and production units revealed the following:-</p> <ol style="list-style-type: none"> Analysis of liquid waste discharge from such units was not done before treatment in 40 units. Treated effluents from such ETP/STPs was not analysed in 14 units. Adequate sludge drying beds were not available with the ETPs/STPs provided in the case of 12 units. 	<p>Discharges from ETP/STP are meeting the standard norms and being tested by the authorised LABS. Sludge Drying Press is available at ETPs at Coaching depots of PUI, VSKP, DLS/VSKP, CRW/MCS. At BBS depot suction pump is used to clear the sludge and local body is accepting it without any objection. If demanded by them, one drying bed will be constructed there.</p> <p>NR:</p> <ol style="list-style-type: none"> As per the audit report, CBW and DLS/AMV from NR are the units where the liquid waste released is not tested before treatment. At CBW, analysis of liquid waste discharged from the unit before treatment is done at NABL accredited laboratory. Instructions have been issued to DLS/AMV for necessary. Treated water discharged from ETPS/STPs was not tested in all units of NR. As per the audit report, CBW and DLS/AMV from NR are units where sludge drying beds are not available. At CBW, sludge drying beds are provided with of the ETP/STP. Audit noted that sludge generated from ETPS/STPs was not tested in 6 units in NR viz. of CD/BSB, CBW, DLS/AMV, DLS/TKD, DLS/LDH & KLKW. In CBW, treated water and d separated sludge are being tested at NABL 	<p>NR- Not acceptable as the reply for testing of sludge generated from ETP/STP at DSL/LDH was not furnished by Rly Admn.</p>
---------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------------------------------------------------

	<p>iv. In 53 units, the sludge generated from ETP/STPs was not tested to find out its disposal method.</p> <p>Thus, the sludge generated out of ETPs/STPs was disposed without mandatory testing as per the norms prescribed.</p>	<p>accredited laboratories to ensure compliance as laid down by SPCB (UPPCB)</p> <p>NCR: PRAYAGRAJ DIVISION:- Clear guidelines from zonal or central level for establishment of Effluent treatment plants (ETP) / Sewage treatment plants (STP) need to be issued for Railway units. With provision of standard guidelines, proposals for setting up ETPs/STPs may be initiated by railway units like ELS/CNB. AGRA DIVISION: One 100 KLD STP has been installed at AGC on 20.01.22 in which sludge drying beds are available. The sludge generated from it being disposed after mandatory testing.</p> <p>WAGON REPAIR WORKSHOP JHANSI:- Two ETP of capacity 10KL and 20KL installed at Wagon Repair Workshop, Jhansi and to discharge the functions, AMC contract is being carried by out sourced staff. Quantity of effluent treated with the ETP is less than the capacity of ETP and the treated water is being used for gardening purposes.</p> <p>NER: ETP installed in GKP and IZN Mechanical Workshops. Inlet and outlet water of ETP are analyzed quarterly from NABL accredited lab in GKP workshop. ETP Water analyzed by UPPCB on monthly basis in IZN workshop.</p>	<p>NCR -: PRAYAGRAJ DIVISION: NCR administration replied that there is no requirement of setting up of ETP/STPs plants at ELS/CNB as there is no such major effluents/sludge discharged from ELS/CNB.</p> <p>NFR- Sludge generated out of ETP/STP installed in KIR and GHY Stations was not treated before discharge into Municipal Sewage Line, as per provisions of the Water Act, 1974.</p>
--	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

		<p>NFR: The discharged water from Guwahati and Katihar are tested in recommended laboratories of SPCB before it is reused for other purposes. Similarly, sludge arising out of these ETPs are dried and disposed as solid waste to Municipality nominated places. For all the ETPs which are coming up at the remaining NGT nominated stations, necessary condition in the incorporated to test the water at SPCB nominated laboratories before its reused. Similarly, the sludge collected from these ETP/STPS is to be dried and disposed by contractor at identified places.</p> <p>NWR: At workshops, ETP outlet liquid testing is done by an outside agency (MOEF & CC recognized, NABL accredited) in coordination with CMT lab as per SPCB guidelines and all parameters like PH & TDS of the report is within limits. At stations, STP outlet discharge is being regularly analyzed.</p> <p>SR: Noted. The Divisions have been advised to conduct periodic testing of effluents from ETP/STPs and confirm the discharge is within the prescribed limits before discharging the same.</p>	<p>NWR- At AII Loco Workshop, the ETP outlet liquid testing was being done. The liquid waste discharged from ETP is disposed off by contractor on monthly basis at AII Loco Workshop. The ETP outlet liquid testing was not being done at Diesel Shed BGKT and JU Workshop. No remarks.</p> <p>SR- Reply of MoR is not accepted. Noting the audit observations and advising the Divisions would not provide any results. Tangible action requires to be taken and results intimated to audit.</p> <p>MoR should monitor and ensure periodic testing of effluents from ETPs/STPs and confirm that the discharge is within the prescribed limits.</p> <p>SCR- Remarks are silent about segregation and disposal of sludge at SC station.</p>
--	--	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

		<p>SCR: Beds for collection of sludge are available in S Workshops. The analysis of liquid waste 5, discharge of ETP is monitored monthly ethrough outsourcing agencies. The sludge from ETPs of Paint shop and Roller Bearing sections are treated as hazardous waste as it contains paints/grease particles. Contract has been given to authorised agencies to collect hazardous waste and it is informed that no sludge is disposed off without confirming its type/ composition.</p> <p>SECR: Effluent of ETP installed at DLS/R is re-used for activities like loco washing, gardening, etc. Sludge of ETP is sent to incinerator for its disposal. Analysis of discharges from ETP/STP is being done. Effluent from ETP/STP is utilized in Coaching. Depots/ Diesel Sheds.for washing.and cleaning purpose. Sludge from the STPs is dried and these sludges are accepted by the local bodies. Sludge of ETP is sent to incinerator unit.</p> <p>SWR: CWM/MYSS: 1. ETP outlet water is analyzed every</p>	<p>SWR- The effluents discharged from stations, sheds etc should be analysed before and after treatment in ETP/STP. The reply is silent about analysis before treatment. Reply is awaited in respect of other workshops, PU etc.</p>
--	--	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

		<p>month by NABL accredited and EP approved Lab (VSIX LABBangalore) and test certificate also obtained.</p> <p>2. KSPCB also collecting samples of ETP outlet water during their inspection for analysis purpose.</p> <p>3. The contents of ETP outlets should be within prescribed limits.</p> <p>4. This ETP treated water is used for coach washing, bio-tank washing and gardening purpose within this Workshops.</p> <p>WR: RS Workshop, Dahod&Coaching depot Indore:- Sample of ETP being taken and analyzed by SPCB approved agency and disposed off accordingly through SPCB approved agency only. ETP plant at Indore Coaching depot is in working at laundry. Lower ParelWorkshop-02 nos. of sludge beds are being proposed for ETP at Fitting II and Common ETP. RS Workshop, Dahod-Quantity of sludge generated is negligible, not adequate for disposal. It will be ensured to test it when adequate disposable quantity is available and will be disposed of through GPCB authorized agency. Lower Parel Workshop- Effluent quality is being tested on monthly basis through outsource, MPCB approved Lab.</p> <p>WCR: TKD: The analysis of the effluents/sludge</p>	<p>WR- Railway Administration's reply is silent on action taken to dispose off ETP sludge at DLS, Vatva where during review it was noticed that substantial quantity of ETP sludge was lying accumulated without disposal since March 2013. Timely action to dispose of ETP sludge needs to be ensured to render the exercise of treatment of hazardous waste meaningful.</p> <p>WCR- Railway Administration has not furnished any remarks about non-analysis of liquid waste before treatment at 2 loactions (Bhopal station & DLS/NKJ), non-availability of adequate sludge drying beds at DLS/NKJ and non-testing of sludge at 2 locations (Bhopal station & DLS/ NKJ)</p>
--	--	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

		<p>discharged from ETP will be started after CTE/CTO approval as per norms.</p> <p>ET: Analysis will be carried out after installation of ETP.</p> <p>Analysis of liquid waste discharge from various units is being done before treatment.</p> <p>Analysis of treated effluents from such ETP/STPS is being done. Adequate sludge drying beds are available with the ETP/STPs.</p> <p>CLW:</p> <p>Analysis of liquid waste discharged from STP is done regularly by West Bengal Pollution Control Board the latest testing report is attached herewith vide annexure 'A'. Adequate sludge Drying Beds are available.</p> <p>RCF:</p> <p>Analysis of the effluent discharged from STPs is being done regularly.</p> <p>Adequate sludge drying beds are available with the ETPs/STPs.</p> <p>MCF:</p> <p>Effluent discharged from STP being analysed regularly as per prescribed norms.</p>	<p><i>It is evident from verification by Audit, of the facts mentioned in MoR's reply, that analysis of the effluents/sludge discharged from ETP/STPs is still not being ensured in many cases. Effective steps are required for such analysis for proper disposal of effluent/sludge.</i></p>
--	--	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

<p>4.3</p> <p>Provision of water recycling plants (WRPSs)</p>	<p>Water recycling refers to reclaiming waste water from industrial, residential, municipal sources, by treating and purifying the waste water for reuse. Based on the extent of the treatment, the reclaimed water can be used for inferior services like coach washing, platform aprons cleaning, gardening, etc. Railway Board instructed⁵⁸ (July 2008 and August 2008) Zonal Railways to provide WRPs in such stations and sheds where water is scarce and the demand for water is heavy. Provision of WRPs at one A1 category station in each zone was emphasized⁵⁹ (March 2015) by Railway Board. Railway Board specifically stated (December 2015) that the provision of WRPs will be extended to all major stations.</p> <p>Audit examined the status of the provision of WRPs in 102 selected major stations. Despite passage of more than 10 years since RB's instructions, provision of WRPs in the 86 major stations out of 102 test checked was not complete as of March, 2020. Thus, such an important aspect of minimising the usage of fresh water, thereby boosting the efforts for water conservation, did not get required attention of railway authorities.</p>	<p>To ensure systematic approach in water management, "Indian Railway Water Policy" was issued by Railway Board in 2017 wherein measurement and accountal of water consumption has already been defined. Metering of the major supply and end-use points have been stressed upon to ascertain the wastage in the system including water saving opportunities. To check the wastage of water, inspections are carried out at regular interval from different level of officers.</p> <p>Railways have been establishing water recycle plants at main consumption centers wherever it is economically viable As on date, 116 Water Re-cycle Plants had been commissioned on Indian Railways. For the year 2022-23, a target of installing 43 WRPs has been set across zonal Railway. Out of these 6 WRPs has been commissioned (as on Sept'2022) and 26 more WRPs are under progress.</p> <p>Further, it is submitted that NGT is monitoring the progress of environmental conservation work such as Water Recycle Plants /Effluent Treatment Plants/Sewage Treatment Plants etc. In view of compliance and given its important for environment conservation works, the work of Water Recycle Plants /Effluent Treatment Plants/Sewage Treatment Plants for railway</p>	<p>ER- The reply is general in nature and is not zone specific.</p> <p>In Eastern Railway, as on 22.02.2023, only 7 out of 43 major stations were having WRPs.</p> <p>ECoR- In absence of any specific action taken in respect of ECoR, there are no remarks to offer</p> <p>NCR- One 0.5 MLD WRP is working at GWL Station</p> <p>NER- Action is being taken by the Railway Administration. Therefore, no comment to offer.</p> <p>WCR- No specific remarks has been furnished for 3 stations (Kota, Pipariya & Hoshangabad) pointed out by audit.</p>
-----------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

	<p>Survey done by Quality Council of India (QCI) on the request of Ministry of Railways also revealed (2019) that out of 720 stations covered in their study, only 25 <i>per cent</i> of the stations had the provision of water conservation measures and provision for water reclamation/waste water use was available on nine <i>per cent</i> of the stations covered in QCI's study. This is indicative of poor response on the aspect of water conservation despite instructions issued (2008) by Railway Board in this regard.</p> <p>⁵⁸ <i>Letter No. 2006/LMB/09/01 dated 19.07.2006 and 04.08.2008</i> ⁵⁹ <i>Letter No. 2015/LM (PA)/08/08WRP dated 04.03.2015</i></p>	<p>stations/colonies/Hospital/buildings as staff amenities may be under taken through regular works program. For this purpose following two new umbrella work has been sanctioned for setting up of WRPs/STPs/ETPs for Railways colonies/buildings/stations on all zonal railways under allocation CAP for the year 2022-23 : -</p> <p>For Setting up of water recycling plant/sewage treatment plant/effluent treatment plants for major railway colonies/hospitals/buildings as staff amenities under Plan Head -51 with the cost of Rs 75 crores (PB No. 2022-23/NR/1144) Sewage treatment plant /Effluent treatment plant at railway stations and water treatment plant to utilize treated affluent for non potable use at major railway stations) under plan Head -53 with the cost Rs 250 crore (PB No. 2022-23/NR/1181)</p>	<p>MoR's reply is general in nature and action taken for provision of WRP at all the major stations, as directed by Railway Board itself in December 2015 may be furnished.</p>
<p>4.4 Provision of Automatic Coach Washing Plants (ACWP) at Coaching depots and car sheds</p>	<p>Automatic Coach Washing Plant (ACWP) is a multistage exterior cleaning system for coaches/trains using pressurized soap solutions and water jets with rotating nylon and cotton consignment brushes to clean complete exterior of the coaches in a rake while placed on the pit-line of the coaching depots. Use of ACWPs helps in</p>	<p>CR: The total nos. of 11 ACWPs are proposed in CR wherein 02 ACWPs namely Wadivandar & Pune ACWPs have 70% progress and Lokmanya Tilak Terminus having 20% progress and rest of the ACWPs are under process.</p> <p>ER: ACWPs have been installed at Asansol, Chitpur, Tikiapara, Bhagalpur and</p>	<p>Zone-wise replies are given as under:</p> <p>ER- The details of ACWP at Ranaghat may please be furnished. Although Railway Board in October 2017 instructed to provide ACWPs in car sheds also on priority basis, it is</p>

	<p>minimization of fresh water consumption as well as effective management of waste water thereby resulting in conservation of water. Railway Board directed⁶⁰ (October 2017) Zonal Railways to provide ACWPs on priority basis at all major coaching depots and car sheds. The aspect of provision of ACWP was also emphasized upon in the Indian Railway Water Policy, 2017. Provision of 63 ACWPs was sanctioned between 2017- 2020 in coaching depots/Car Sheds. However, progress of work was very slow as indicated below:</p> <p>-</p> <ol style="list-style-type: none"> Work for providing ACWP was completed in nine cases only as of March 2020. In 43 cases, work on providing ACWP did not commence at all. In eight cases, the work is still in progress. In three cases of WR, the records to confirm the progress of work were not available. <p>Thus, it is clear from the progress of the work that required effort lacked seriousness on such a priority work meant for conservation of water</p>	<p>Ranaghat. Four more ACWPS are planned for installation at Howrah, Bandel, Barasat and Asansol.</p> <p>ECR: Automatic Coach Washing Plant with provision of ETP (Effluent Treatment Plant) has been commissioned at Saharsa, Jaynagar & Gaya on 13-02- 2021, 31-05-2021 & 21-07-2022 respectively in East Central Railway. Similar project in ECR is under advance stage at Sonpur, Jhajha & Gaya MEMU Shed.</p> <p>ECoR: Automatic Coach Washing Plants installed at major Coaching Depots at PUI & VSKP. Indents sent to COFMOW for MEMU Shed/KUR and to COS for BBS Coaching Depot on dated 30.09.2019 & 10.02.2021 respectively.</p> <p>NR: 43 cases where ACWP work was not found to have been commenced by Audit, three cases pertain to NR which are, CD/BSB, CD/DEE & CD/ASR. The detailed status at these locations is as follows: TCD/BSB ACWP has been installed at BSB depot in Oct 2021 with 20 KLD ETP</p>	<p>still under planning stage in Eastern Railway after more than five years.</p> <p>ECoR- Since more than two years have elapsed from indent sent to COFMOW on installation of ACWP at KUR and BBS, ECoR should expedite the same for early commencement of works</p>
--	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

	<p>resources. The resultant benefits to minimize the fresh water consumption and recycling of waste water could not be achieved.</p> <p>⁶⁰ letter No. 2001/M1/141/1 Vol-I dated 20.04.2010 and 27.10.2017</p>	<p>linked with inlet and outlet of ACWP. 5 CD/DEE-functional since 04.04.2021 CD/ASR-commissioned on 13.08.2022 and is currently functional.</p> <p>A total of 6 other ACWPS have already been -installed & commissioned over NR and are operational at Budgam, Katra, Hazrat Nizamuddin, DLT, Anand Vihar Terminal and Yog Nagri Rishikesh Four ACWPs have been sanctioned under Umbrella works viz. at CDG, DMU Shed/BDGM, DMU Shed/JUC and EMU Car Shed/GZB.</p> <p>03 nos. ACWPS are under procurement under ERW funds at New Delhi - Rajdhani complex, Chheharta and Shakurbasti.</p> <p>NER: ACWP is commissioned at BSBS. ACWP at GTNR is in advanced stage of completion. This work is sanctioned at CBJ, ARJ and CPR. On other coaching depots ACWP could not be installed due to curve in entrance line.</p> <p>NFR: Automatic Coach Washing Plant is already installed at Kamakhya and Alipurduar & it is under installation at Agartala and expected to be completed shortly. In addition to the above, 6 more coaching depots (New Jalpaiguri, Silchar, Siliguri Jn., Katihar, Naharlugun &</p>	<p>NFR- Final action taken to provide Automatic Coach Washing Plant in 06 more Coaching Depots may be provided.</p>
--	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------------------

		<p>Dibrugarh) are under the provision of ACWP for which purchase order/LOAS have already been issued. Thus the depots holding more than 150 coaches are covered for provision of ACWP for minimization of consumption of fresh water and increasing the use of recycled water. And thus, the fresh water management is systematically being followed to avoid any excessive usage of fresh water.</p> <p>NCR: PRAYAGRAJ DIVISION:- For waste water management following steps has been taken by PRYJ coaching depot. Tender for Automatic Coach Washing Plant for PRYJ coaching Depot opened on 05.08.2022, under technical evaluation at COFMOW, after finalization of tender it shall be installed. Water recycling plant already installed at PRYJ coaching depot; its operation is being done for recycling of waste water of washing line of PRYJ coaching depot. Effluent Treatment Plant (ETP) has also been commissioned on 25.08.2022 at washing line of PRYJ coaching depot, waste water of mechanized laundry is being recycled for washing of coaches at washing line. AGRA DIVISION:- One ACWP has been provided at C&W Coaching depot, Agra and it is commissioned on 9th January 2021. JHANSI DIVISION:- One ACWP has</p>	<p>NCR- PRAYAGRAJ DIVISION: Railway reply is general in nature. However, Automatic Coach Washing Plant could not be installed at coaching depot PRYJ due to non-feasibility reason.</p> <p>JHANSI DIVISION: During the verification of the reply received from the railway administration, it was seen that one ACWP in Jhansi is in the planning stage, and one ACWP has been planned at Gwalior station, which is in the tendering process.</p> <p>SR- Reply of MoR is explanatory in nature and not acceptable.</p> <p>The fact remains that ACWP</p>
--	--	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

		<p>been Planned at C&W Coaching siding GWL.</p> <p>NWR: On NWR, there are 10 Coaching depots, in which 09 ACWPs have already been provided. LOA has been issued for ACWP at JP Coaching depot and one more ACWP will be provide at BGKT in this year.</p> <p>SR: The ACWPS for Ernakulam, or Kochuveli, Tiruchchirapalli, SCS/Tambaram and CS/Avadi are not on sanctioned under BOOT model. These Machines are sanctioned as regular M&Ps by Board and procured through COFMOW. The scope is for supply and installation and commissioning of ACWP. ACWPS were sanctioned for Ernakulam & Kochuveli in 2018-19 M&P Programme. Tiruchchirapalli and CS/Tambaram&Avadiin 2019-20 M&P Programme. COFMOW has issued AT No. OP 308261, Dt. 15.11.2019 on M/s Oriental Manufacturers, Vadodara for Ernakulam & Kochuveli. Due to Pandemic situation in 2020, work was not executed by the firm. CME/Plg has conducted a virtual meeting between Firm and consignees on 28/05/2021. During the meeting, consignees requested the firm to visit the</p>	<p>sanctioned for three Coaching Depots at Ernakulam, Kochuveli, Tiruchchirappalli and in Car Sheds at Avadi and Tambaram are yet to takeoff.</p> <p>MoR may explore the possibility of providing ETP/STP along with ACWP for better water management through recycle and reuse.</p>
--	--	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

		<p>site to freeze the location and other technical issues. CME/Plg has also insisted upon early approval of GAD. Stages of ACWPS over SR are as follows:</p> <p>ERNAKULAM: GAD approved on 03.06.21. Meanwhile, Firm visited the site on 11.07.21 and sorted out the various technical issues. Probable supply dates as per PSR (Periodical Status Report) of COFMOW were revised to 30.06.20, 30.04.21, 30.11.2021, 30.03.2022 and 30.04.2022.</p> <p>KOCHUVELI: Firm visited the site on 10.07.21 and conducted inspection and advised that the site is not suitable, as the distance between the site & the control room + other accessories is around 100m and there is no visibility due to a curve, which leads to increased capacity of pump and length of Pipes & Cables. Since, firm has confirmed the non suitability of site, it is proposed to shift to Tirunelveli and COFMOW was also advised to issue amendment for consignee change from KCVL to TEN, Ivide this office letter dated 09.09.21. COFMOW was also reminded on 01.12.2021, yet to issue amendment.</p> <p>TIRUCHCHIRAPALLI: The ACWP was sanctioned under Umbrella work. Firm has visited the site on 12.07.21, conducted a joint survey and identified a suitable site.</p>	
--	--	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--

		<p>After pursuing regularly, the Firm submitted GAD on 15.12.2021 for consignee's approval.</p> <p>CS/TAMBARAM & CS/AVADI: The ACWPS were sanctioned under Umbrella work. Indents were sent as mentioned in the above table for exterior washing of EMU & MEMU types of rolling stocks in the same coach washing plant.</p> <p>COFMOW issued amendment-03 dated 26.02.2021 and included CS/Tambaram& CS/Avadi.</p> <p>Firm visited the above two locations on 07.07.21 surveyed both sites and confirmed that exterior washing of EMU & MEMU types of rolling stocks in the same coach washing plant is not possible as width of EMU is 418 mm more than MEMU.</p> <p>COFMOW was advised to redirect the existing order to the needy locations and place fresh order duly covering the requirements of both consignees, i.e., the Coach washing Plant must be capable of washing both EMU & MEMU rakes, vide letters dated 26.07.21, 09.08.21 and 13.12.21.</p> <p>SCR: 04 ACWPs are already commissioned and are in working condition and LOA has been issued for 02 ACWPs.</p> <p>SER:</p>	<p>WR- In three places (Sabarmati Coaching Depot, Kandivali Carshed & Mumbai Central Car shed) where works have been initiated, steps may be taken to ensure timely completion.</p>
--	--	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

		<p>ACWP is operational at Hatia Coaching Depot, Tata Coaching Depot & Padmapukur Coaching Depot.</p> <p>SECR: 03 ACWP has been commissioned at 03 coaching depots namely BSP, DURG, GONDIA.</p> <p>WR: The position pertaining to coaching depot and Car shed is as follow:- Gandhidham Coaching depot- Completed. Sabarmati Coaching Depot- Work in progress New Bhuj Coaching Depot- Completed. Vadodara MEMU Shed- Completed. Bandra Terminus Coaching depot- Completed. Mumbai Central Coaching depot- Completed. Kandivali Carshed- Work in progress Mumbai Central Car shed- LOA issued.</p> <p>WCR: ACWP has been established at Jabalpur, Bhopal/HBJ and Kota station.</p>	<p><i>Steps taken to ensure early installation and/or completion of ACWP mentioned above may be furnished.</i></p>
--	--	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------------------------------

<p>4.5 Progress of works related to management of waste sanctioned from the funds created for Environment Related Works (ERWs).</p>	<p>Keeping in view it's commitment towards cleaner environment as also the need to comply with various statutory obligations towards mitigation of environmental impact, Railway Board, decided⁶¹ to include environment related works (ERW) as an integral part of Works Estimates for all Plan Heads excepts PH-17 (Computerization). Provision for ERWs was made as an itemized one or on lump sum basis (equal to one <i>per cent</i> of the cost of work). The works chargeable to EBR (IF) were to be excluded for the purpose of lump sum provisioning towards ERW. These identified works are to be coordinated/ managed by EnHM wing of the Zone/Division/PUs and such works should generally be completed within two years. Certain items related to waste management like provision of ETPs/STPs, WRPs, ACWPs, waste to compost, waste to energy plants <i>etc.</i> were included in the specified list of ERWs. As the progress on ERWs was slow on Zonal Railways, Railway Board instructed⁶² (March 2020) all Zonal Railways to make more serious efforts and ensure expeditious completion of</p>	<p>CR: Under the provision of Environment Related Works (year 2019-20), total 10 works viz 07 nos STP, 02 nos of WRPs, 01 no of Waste to Compost plant has been sanctioned. The completion of the same is under progress.</p> <p>ECR: 04 nos WRP plant for RNCC, PNBE, DBG & DHN sanctioned in year 2018-19. Work of installation of WRP at RNCC, DBG & DHN completed on 01.10.2020, 01.03.2022 & 07.03.2022 respectively. However, Work of WRP at Patna is still in progress.</p> <p>02 nos of WRP plant for BJU & MFP sanctioned in year 2019-20, work awarded on 09.01.2020. WRP at BJU commissioned in March 2022 and work is under process at MFP.</p> <p>01 Waste to Energy Plant for Patna sanction in 2018- 19, work awarded on 03.12.19 & completed on 01.09.2021 and in function.</p> <p>01 Waste to Energy Plant for DDU sanction in 2019- 20, work awarded in March 2020 work completed in June 2021.</p> <p>05 no composting Plant planned & sanctioned in year 2019-20, Date of PO 07.02.2020 & completion date 26.11.2020.</p>	<p>ECoR- As per the Audit Report,</p>
--------------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------

works.

Review of position on utilisation of funds accumulated under ERW revealed that funds remained unutilised to the extent of 53 *per cent* during the period under review as indicated in Table 4.1.

Table 4.1 Statement showing the funds accumulaed under ERW remaining un-utilised

.(Rs. in crore)

Year	Funds accumu- u-lated for ERW during the year	Fund s utiis ed duri ng the year	Funds remain ing un- utiised at the end of the year	Funds un- utiised (in per cent)
2015-16	0.48	0.00	0.48	100.00
2016-17	24.90	2.96	21.94	88.11
2017-18	83.74	30.21	53.53	63.92
2018-19	208.53	108.67	99.86	47.89

ECOR:

Concerned authorities are being regularly approached for provision of ERW funds as per guidelines issued by RB from time to time. So far 56 nos of environmental work to the tune of Rs.36.76 Crores have been taken up through ERW funds in ECoR. However, some methodology is required to be framed for ensuring automatic provision of ERW funds through IRPSM portal which is accessible to all railway authorities.

NR:

In the year 2019-20, 3 works were approved from s ERW funds of total value Rs. 4.98 cr. These D. include, one water

total 10 ETP/STP were sanctioned under ERW fund during 2018-19 and 2019-20 and out of which no ETP/STP was commissioned till March 2020. Similarly, only one waste to compost plant was commissioned out of 13 sanctioned under ERW fund during 2019-20 in ECoR.

The execution of ongoing ERW works had not been completed due to paucity of funds. Although the due amount had been taken up through ERW funds by respective departments, the full amount had not been sent to EnHM wing.

In view of the above, ECoR should ensure proper accounting of earmarked ERW amount from other executive departments to EnHM wing so that environment related works are not hampered due to shortage of fund.

		<p>nominated stations for installation of ETP/STP of which Guwahati and Katihar is completed and for balance procurement/installation is at various stages. As far as, ACWP is concerned sanction has been given to Agartala and Alipurdwar from EnHM funds in which Alipurdwar is commissioned and Agartala nearing completion. However, at present, out of the total accrued provision towards ERWS, 30 works have been completed under EnHM fund, totaling to the value of Rs. 33.86 Crs.</p> <p>NWR: During the last 05 financial years the total fund accumulated under ERWs is Rs.48.70 Crore and Rs.40.80Crore utilized for sanction of ERWS.. Means; 83.77 % funds were utilized for sanction of ERWs. Therefore maximum funds have been utilized. Total 08 ETP/STPs/OWCs were sanctioned under Environment related works in last 03 years and same has been completed and commissioned. 02 STPs were also sanctioned at LGH and HMH station during the year 2021-22. Efforts are being made for maximum utilization of funds in ERWs.</p> <p>SR: Noted for compliance. Out of Rs. 71.59 Crores accrued towards '1%' Environmental Related Works (ERW) (as</p>	
--	--	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--

		<p>on 30/11/2021), Rs.53.75 Crores (75.08%) has already been sanctioned. Proposals to the cost of Rs.13.01 Crores are under consideration for prioritization by GM upon sanctioning the total Sanctioned Fund amounts to Rs. 66.76 Crores (93.25%).</p> <p>It is also pertinent to mention that in addition to above, approximate cost of ERW works required by Divisions/Workshops for complying with various orders of Hon'ble NGT was compiled. Besides Rs.9.02 Cr already provided by CN organization, additional funds to the tune of Rs.34.4 cores was sought from CN organization towards the ERW requirements of various units. However, only Rs.42.13 lakhs has been spared by the construction organization.</p> <p>Further, it is mentioned that considering the shortage of Funds available priority has been assigned for those ERW Works for complying with various Orders of Hon'ble NGT.</p> <p>It is also mentioned that Status of progress of 'Environment Related Works (ERW)' approved are reviewed periodically at Divisional and Zonal Level. The deficiencies noted are advised to Divisions and the respective Department for early completion of the projects. Photographs on progress are collected</p>	
--	--	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--

		<p>regularly and Google sheet on 'Environment Related Works (ERW)' is created and is updated regularly by Divisions for real time monitoring of progress of Works.</p> <p>SER: Progress of WRP/ETP/STP: Available-9 (ADA, BKSC, CKP, ROU, JSG, DGHA, RNC & HTE & SRC coaching depot), Under construction-5 (BQA, ADA, TATA, BLS & SHM), Under Process- 1 (KGP), Not required-5 (JGM, MDN, MCA, BZN, PKU as bio-toilet have been provided)</p> <p>Waste to composting plant: Available – NGT nominated station status: 19 (RNC, HTE, CKP, TATA, ROU, JSG, KGP, BLS, JGM, MDN, MCA, SRC, BZN, PKU, ADA, PRR, BQA, VSU & BKSC), At DGHA generated waste is being handed over to Municipal Authority for further process. Construction works are in progress under IRCON at SHM station, however, generated waste is being taken by Municipal Authority. Waste to Energy: Modular Bio-gas plant at GRC.</p> <p>SWR: UBL: 07 STP has been sanctioned under ERW and awaiting the calling of tender for execution of work. 120 Numbers of rain water harvesting plants have been sanctioned under ERW.</p>	<p>WCR- Railway Administration has not furnished any specific remarks about utilization of funds under ERW and the progress of works related to waste management sanctioned under ERW, as pointed out by audit.</p> <p>CLW- Correspondence made with CLW admn, reply not received.</p> <p>WR- Status of incomplete works on Western Railway has not been furnished.</p> <p><i>MoR have furnished the details of progress made in completion of</i></p>
--	--	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

		<p>SBC: 4 organic waste composters were installed at KJM shed, now a compost plant is under process at SBC & YPR stations.</p> <p>MYS: Organic waste composter for composting of wet waste is operational at DVG, ASK, SMET and HAS.</p> <p>SWM plant is operational at MYS.</p> <p>02 STP has been sanctioned under ERW and DE is under preparation.</p> <p>SECR: Amount of Rs 3.71 Cr. has been utilized for the provision of STP and Rs. 5.73 Crs. has been utilized towards setting up of WRPs in SECR.</p> <p>WCR: In view to comply with various statutory obligations towards mitigation of environmental impact, 39 works of WRP/ETP/STP have been sanctioned from the funds created for Environment Related Works (ERW); with sanctioned cost-32.3 Cr.</p> <p>CLW: Funds under Environmental Charges have been saved till 2021-22. Funds for Rs. 3,03,500/- provided for 02 (Two) ERWs in 2022-23.</p> <p>MCF: Under ERWs, MCF is having Rs. 4.67 Cr. which will be utilized for construction of</p>	<p><i>works sanctioned under ERW; however, effective action for timely utilization of funds accumulated under ERW is required to be taken. Replies to the observations raised by ZR may be furnished.</i></p>
--	--	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

		additional STP plant to treat the sewerage water.	
4.6 Conclusion	<p>Railways use water at stations as also for units such as workshops, sheds etc. Provision of ETPs/STPs/WRPs/ACWPs was envisaged in pursuance to the water policy. NGT had also directed that effluents generated at stations/coaching depots/yards should be diverted to ETP/STPs and not allowed to seep in ground water.</p> <p>Study in Audit revealed that ETPs/STPs were not commissioned as planned despite availability of funds for environment related works. Further, many of the ETPs/STPs commissioned were not operational. Shortcomings in process of handling and disposal of effluents and sludge were noticed in some of the ETPs/STPs. Water recycling plants were not found to have been installed defeating the objective of minimization of usage of fresh water. Progress on the installation of ACWPs at the coaching depots/car sheds was very slow. Resultantly, the objective</p>	Noted for compliance. No comments please.	<i>No further comments to offer.</i>

	<p>to minimize water consumption remained unachieved.</p> <p>Objective of creating ERW Fund, an initiative to commit to clean environment by way of providing ETPs/STPs/WRPs, compost plant and solid waste management plant largely remained unutilised as funds created remained unutilized due to slow/nil progress of environment related works.</p> <p style="text-align: center;">Summary of Audit findings</p> <ul style="list-style-type: none"> • Statutory requirement of treatment of waste before its discharge could not be effectively fulfilled due to ETP/STPs remaining non-functional besides, environment concerns of contamination of ground water/water bodies remaining unaddressed. • Slow progress in providing water recycling plant and automatic coach washing plant adversely affected the aspect of better management of fresh as well as waste water as prominently placed in the Indian Railways Water Policy, 2017. 		
--	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--	--

<p>4.7 Recommendation</p>	<p><i>IR needs to develop a robust monitoring mechanism to oversee the expeditious completion of the works such as provision of water recycling plants, automatic coach washing plant meant for water conservation under Water Policy of IR.</i></p>	<p>Noted for compliance please. However, it is mentioned that to ensure systematic approach in water management, "Indian Railway Water Policy" was issued by Railway Board in 2017 wherein measurement and accountal of water consumption has already been defined. Metering of the major supply and end-use points have been stressed upon to ascertain the wastage in the system including water saving opportunities. To check the wastage of water, inspections are carried out at regular interval from different level of officers. Railways have been establishing water recycle plants at main consumption centers wherever it is economically viable. As on date, 116 Water Recycle Plants had been commissioned on Indian Railways. For the year 2022-23, a target of installing 43 WRPS has been set across zonal Railways. Out of these 6 WRPS has been commissioned (as on Sept'2022) and 26 more WRPS are under progress.</p> <p>Following two new umbrella work has been sanctioned for setting up of WRPs/STPs/ETPs for railway stations/colonies/Hospital/buildings on all zonal railways under allocation CAP for the year 2022-23.</p> <p>For Setting up of water recycling plant/sewage treatment plant/effluent treatment plants for major railway</p>	<p><i>Though, the MoR have noted the audit recommendations for compliance, it is suggested that effective and time bound provision of ETP/STP/WRPs may be ensured particularly in view of the scarce water resources and also complying with the regulatory requirements under 24 Verifiable indicators.</i></p>
--------------------------------------	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

		<p>colonies /hospitals/buildings as staff amenities under Plan Head -51 with the cost of Rs 75 crores (PB No. 2022-23/NR/1144).</p> <p>Sewage treatment plant /Effluent treatment plant at railway stations and water treatment plant to utilize treated affluent for non potable use at major railway stations) under plan Head -53 with the cost Rs 250 crore (PB No. 2022-23/NR/1181).</p>	
Chapter 5 Management of bio-medical waste generated at Railway Hospitals			
	<p><i>Audit Objective 4</i></p> <p><i>Whether the assessment, management and disposal of waste generated at railway hospitals (Bio-Medical Waste) was done as per applicable Laws and Rules.</i></p> <p>The Railway Medical Department has the objective of keeping employees fit and healthy for efficient railway operations by establishing various railway hospitals right from the zonal level to dispensaries at remote field levels. These units produce huge quantum of bio-medical waste. Bio-medical waste implies waste generated during the diagnosis, treatment or</p>		

	<p>immunisation of human beings or research activities pertaining thereto.</p> <p>Ministry of Environment, Forest and Climate Change issued the Bio-Medical Waste (Management and Handling) Rules (BMW Rules) in 1998, 2016 and 2018 in exercise of the powers conferred under the Environment (Protection) Act, 1986 which provides a regulatory frame work for management of bio-medical waste generated in the country. This included collection, segregation, treatment and disposal of bio-medical wastes in an environment friendly manner thereby reducing the bio- medical waste generation and its impact on the environment. Efficacy and efficiency of the process of collection, segregation and disposal of bio-medical waste was examined in audit in respect of 72 selected railway hospitals. Deficiencies noticed are covered in the succeeding paragraphs.</p>		
<p>5.1</p> <p>Authorisation for handling of bio-medical waste</p>	<p>Rule 10 of the BMW Rules stipulated that every occupier⁶³ shall obtain authorisation from SPCB for handling of bio-medical waste. The occupier is required to fill the details like quantity of waste generated, method of treatment and disposal, mode of</p>	<p>Details are attached at Annexure 5.1</p> <p><u>Authorization for handling of Bio-Medical Waste:-</u></p> <p>CR:- JRH Byculla:- Dr.</p>	

	<p>transportation of bio-medical waste and details of waste treatment equipment available <i>etc. in</i></p> <p>Form-II prescribed under the Rules. Every occupier is mandatorily required to take all necessary steps to ensure that bio-medical waste is handled in accordance with BMW Rules and without any adverse effect to human health and the environment.</p> <p>It was observed that the required authorisation was not obtained from the concerned SPCBs in the case of 26 hospitals (<i>Annexure- 5.1</i>). This was attributed to: -</p> <ul style="list-style-type: none"> • Non-conversant with the prescribed rules and procedures (NFR), • Non-receipt of instructions from higher authorities (ER), • Non-filing of application to SPCB (ECR, SR), • Non-pursuance of application filed with SPCB <i>etc.</i> (ECR, SECR, Metro Rail). <p>Thus, such an important (authorisation from SPCB for handling bio-medical waste) matter of environmental concern for proper management of bio-medical waste remained unaddressed.</p>	<p>B.A.M. Hospital, Byculla has a contract for waste disposal with M/S SMS Envoclean (P) Ltd. for handling of BMW, which is the sole agency authorised by MCGM for disposal of BMW.</p> <p>DRH/Nagpur:- The authorisation from SPCB is not received due to unavailability of STP.</p> <p>SDRH/Igatpuri:- Obtaining of authorisation for handling of Bio-Medical waste of this hospital is under process. Outsourced agency nominated by Nasik Municipal Corporation.</p> <p>SDRH/Kurudwari:- Outsourced authorisation obtained by agency.</p> <p>ER:- SDRH/Andal:- Applied for consent to operate and authorization certificates to WBPCB and it is under process. Disposal of Biomedical waste at SDRH, UDL is out sourced.</p> <p>ECR:- DRH/DNR had applied on</p>	<p>CR- STP set up is under process. Final outcome may be communicated please.</p> <p>ER- No further comments. However, in respect of BRSH Sealdah, DRH Howrah and Liluah workshop Hospital, Audit observed that there was delay in renewal application and subsequent grant of Authorisation and CFO that resulted in operation of the Hospitals without Authorisation and Consent for a substantial period.</p>
--	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

	<p>MoR in their reply admitted (May 2022) that authorization is yet to be obtained for the hospitals pointed out in the Report, though the process for seeking authorisation under Bio-Medical Waste Rules was stated to be initiated for many hospitals.</p> <p><i>63 In the context any Railway healthcare facility including dispensary at lowest field level.</i></p>	<p>20.04.2019 to BSPCB for authorization but BSPCB rejected without assigning any reason. Matter is being persuaded to BSPCB, if it is needed DRH/DNR will apply a fresh.</p> <p>SDRH/Gaya:- As per approval of the Competent authority the tender documents for engagement of Pvt. Agency for disposing of Bio Medical Waste of Sub divisional hospital, ECR, Gaya had been prepared, first time floated through IREPS and uploaded on 21/12/2021, bidding period starts on 28/12/2021 & closed on 11/01/2022, but no any bidder (agency) had participated.</p> <p>Again, we have sent the proposal and sanctioned concurred estimate to Sr DMM, ECR, DDU for the process for engagement of Pvt. Agency for disposing of Bio Medical Waste of Sub divisional hospital, ECR, Gaya through GeM, duly four times disposal of Bio Medical Waste tender had been uploaded on GeM, but no any agency willing to do this work with such a small Sanctioned concurred amount of RS 125088.00 (Rs One Lakh twenty five thousand eighty eight)</p>	
--	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--

		<p>only.</p> <p>Chief Nursing Supdt./Gaya is authorized custodian for the disposing of Bio Medical Waste of SDRH, GAYA. At present BMW has been disposing manually in the supervision of Chief Nursing Supdt. by their staffs as per BMW Norm. Hence, She had strictly directed to dispose off all types of BMW, which is generated in this hospital in each & every places like Indoor Wards, OT Room, Pathological, Casualty Room, Outdoor Wards etc in her intensive supervision as per norms of BMW on daily basis and maintain their records properly, until not finalized and awarded to this BMW work through GeM by Sr. DMM/ECR/DDU.</p> <p>Currently again, to start the disposing of BMW work of SDRH through private agency, the tender has floated through GeM by Sr DMM/ECR/DDU on 23/08/2022 for kind perusal and information please. In near future this work will be duly finalized as per BMW norms.</p> <p>NR:- Super Speciality Hospital Lucknow:- Does not pertain to NR</p> <p>NCR:- Authorization for</p>	
--	--	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--

		<p>handling of Bio-Medical Department is given below;</p> <ul style="list-style-type: none"> - Required authorization from SPCB obtained by Divisional Hospital, Agra in time w.e.f 05.02.2019 Valid for 05 years. -Required authorization from SPCB of Sub-divisional Hospital, Kanpur was obtained on 17.01.2019 for a period of 05 years and contract agreement with UP Pollution Control Committee was also done. <p>NER:- Under process of certification from SPCB. Now BMW is being disposed by outsourced authority. Firm is having SPCB certification in CH/Lalit Narayan Mishra Railway Hospital(LNMRH)/Gorakhpur, DRH/Varanasi, SDRH/Gonda and Mechanical Workshop Gorakhpur.</p> <p>NFR:- Central Hospital/Maligaon:- The Central Hospital, Maligaon as an occupier is fully conversant regarding prescribed rules and procedures of Bio-Medical Waste Management, because this hospital submitted the applications and fees every year for obtaining authorization from SPCB (State Pollution Control</p>	<p>NFR- Central Hospital, Maligaon: CH/MLG applied for authorization from SPCB and 05 years' charges of `1,25,500/- was deposited vide Draft No: 247142 dated 12.08.2022. But, Authorization Letter was not received from SPCB authorities. Further action taken in this regard may be furnished.</p> <p>SDRH/Rangiya: CMS/RNY stated that</p>
--	--	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

		<p>Board) (Receipt of payment enclosed). Unfortunately, SPCB did not hand over the authorization and consent letter to the Central Hospital, Maligaon till now, the SPCB has not handed over the authorization letter to any Govt. Hospital. This year also fees and application has been submitted to SPCB for obtaining authorization</p> <p>SDRH/Rangia:- N.F Railway Hospital at Rangiya is a 25 bedded Hospital with IPD & OPD Facilities only, without any operation theatre and labour room. As there is no specialist doctor posted at Rangiya, bed occupancy is very low, also it is close to the Central Hospital, Maligaon where speciality management are available, average foot-fall to the hospital is on the lower side. So, total amount of hospital waste generated is less and generated dry waste handled by the department staff and disposed as per extant rule.</p> <p>Pollution Control Board, Assam had been approached for authorization to handle Bio-Medical waste at Rangiya and the Board supplied with an extensive list of prerequisite administrative</p>	<p>authorization was not obtained due to technical difficulties. Further steps taken by MoR to resolve the issue may be furnished.</p> <p>SECR- Audit noticed that Authorization for handling Bio Medical Waste at DRH/R & SDRH/BMY is still pending with Chhattisgarh Environment</p>
--	--	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

		<p>and infrastructural issues which are being addressed by the Railway administration, these are lengthy procedure and would require six to twelve months time.</p> <p>SCR:- DRH/Nanded and Sub-DRH/PURNA process initiated for SPCB certification.</p> <p>SECR:- For obtaining Authorization for SPCB application with fees has been submitted to Chhattisgarh Pollution Control Board, Raipur on 08.02.2022. Observation raised by CGPCB for Divisional Railway Hospital/Raipur and Sub. Divl. Railway Hospital/Bhilai Marshalling Yard has been complied and submitted to CGPCB vide letter No. CMS/R/Medical2022/210 dated 27.04.2022 and MS/BMY/Medial/2022/705 dated 07.06.2022 . Further it is pending with CGPCB.</p> <p>SR:-DRH/Goldenrock:-The existing Sewage Treatment Plant (STP) for Ponmalai Railway Hospital is to be replaced with a new plant. The work is under process by DEN/TPJ. Authorization to Railway Hospital Ponmalai from</p>	<p>Conservation Board (CGECB) due to non-commissioning of STP/ETP plant at DRH/R & SDRH/BMY. Further, tenders for installation of STP/ETP are yet to be floated. Therefore, the process of commissioning of the STP/ETP may be expedited to avoid further delay in obtaining authorization from SPCB</p> <p>SR- Reply of MoR is not accepted. Authorisation for BMW is yet to be obtained in these hospitals</p> <p>Reply may be furnished w.r.t observations raised by ZR.</p>
--	--	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

		<p>Tamilnadu Pollution Control Board will be obtained once the STP work is completed.</p> <p>DRH/Arakkonam:- DRH/AJJ has applied online for Air and Water consent to State pollution Control Board vide application No.CTO36958524.</p> <p>SDRH/Podanur:- Authorization from SPCB for handling bio-medical waste will be sought shortly.</p> <p>SDRH/Villupuram:- Contract for Biomedical waste disposal at SDH/VM with Tamilnadu waste management limited, Chennai-29 expired. Process for renewal of biomedical waste disposal has been initiated on 17/01/2022 with Pondicherry solid waste management private Ltd, Puducherry-605502 and Contract is yet to be finalized.</p> <p>Authorization for handling biomedical waste from SPCB will be applied after renewal of BMW disposal contract.</p> <p>Metro Railway/Kolkata:- Application for authorisation of Bio-medical waste was applied online in the year 2021 under West Bengal Pollution Control Board and is under process.</p>	
--	--	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--

<p>5.2</p> <p>Delay/discontinuity in renewal of authorization for handling of bio-medical waste</p>	<p>Rule 10 read with Form-II of the BMW Rules provides for obtaining fresh authorisation from SPCB before the expiry of previous one by each hospital handing bio-medical waste. For any changes in the activities of the hospital such as increase in the number of beds, change in the handling process of bio-medical waste, a fresh authorisation was mandatory.</p> <p>The aspect of delay/discontinuity in renewal of authorisation was examined in Audit and it was observed that the authorisation was not got renewed in time in case of 24 railway hospitals (<i>Annexure-5.2</i>). The delay/discontinuity ranged between one to six months in two cases, beyond six to 18 months in three cases, beyond 18 to 30 months in three cases and even extended beyond 30 months in 16 cases. Delays/discontinuity in authorisation was attributed to: -</p> <ul style="list-style-type: none"> • Delay in filing application (ER, NEFR, WR, RPU); • Non-pursuance of application filed with SPCB (WR), absence of instructions from higher authorities (ER); non-payment of additional fee (SCR). • Renewal refused by SPCB for want 	<p>Details are attached at Annexure 5.2</p> <p><u>Delay/discontinuity in Authorization for handling Bio-Medical Waste:-</u></p> <p>CR:- DRH/Kalyan :- An application for Bio-medical waste authorisation was submitted to SPCB on 15.04.2015 or renewal of authorisation. Again on 24.03.2018 an online application was sent to SPCB for authorisation. On 11.09.2019 the SPCB refused the application as there is no STP plant.</p> <p>ER:- B.R. Singh Hospital/Sealdah:- Yes, noted. Due to some technical issues with online application, delay has taken place, due care will be taken for no delay in future.</p> <p>DRH/Howrah:- Authorization for handling biomedical waste has been obtained on 16.11.2021 with validity upto 30.11.2026 from West Bengal Pollution Control Board.</p>	<p>CR- STP Plant work is in progress and fresh application will be initiated after completion of STP Plant work. Final outcome may be communicated.</p>
-------------------------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------

	<p>of installation of ETP/STP (NR, NWR, SCR, WCR);</p> <ul style="list-style-type: none"> Required documents/ information not submitted to SPCB (WCR) and non-collection and not disinfecting the effluents before disposal into ETP (SR). <p>It is evident that lack of efficient monitoring regarding renewal of authorisation had resulted in such delays/ discontinuance in authorisation.</p> <p>MoR in their reply stated (May 2022) that approval for authorisation is under process in many cases and in some cases, response from the concerned SPCBs is also delayed.</p>	<p>Liluah Workshop Hospital/Liluah:- Presently same is complied.</p> <p>NCR:- Delay/ discontinuity in renewal of authorization for handling of Bio-medical waste:- There was no delay or discontinuation in renewal of authorization of BMW with UPPCB as it was done on 29.04.2020 for a period of 03 years which valid upto 28.04.2023.</p> <p>NR:- CH/NDLS:- On line application number 3004514 for renewal of authorisation was submitted to DPCC on 10.12.2019. However, no action was taken during COVID-19 pandemic. Application was resubmitted on 28.01.2021. Now DPCC has issued renewal of authorisation under BMW Rules 2016 w.e.f. 10.12.2019 for five years with validity up to 09.12.2024.</p> <p>DRH/Moradabad:- On expiry of earlier authorisation, fresh</p>	<p>NR- Process of installation of STP needs to be expedited so that renewal of authorization may be obtained from SPCB.</p>
--	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------------------------------------------------

		<p>authorisation was started online as per new guidelines but the form could not be completed due to non availability of ETP & STP plant. Hence, it is being delayed. The process of proposal of ETP/STP plant is under process with Engineering department, MB division.</p> <p>DRH/Ambala Cant.:- Renewal of authorisation has been refused by HSPCB for want of installation of ETP. Proposal for installation of ETP plant is under process with Engineering department since March 2017. Regular reminders are being given to Engg. Department for compliance of BMW Management Rules 2016.</p> <p>SDRH/Amritsar:- Renewal of authorisation is pending from 01.04.2016 to 31.03.2019. An application No. 5065195 was generated but no reply received. Proposal for installation of STP is under process with</p>	
--	--	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--

		<p>engineering department since June 2019.</p> <p>NFR:- DRH/Dibrugarh Town:- Divisional Hospital, DBRT obtained the necessary Authorization from Assam Pollution Control for 2016-17. Due to changed procedure and necessarily to process the same permission online the necessary Authorization was obtained for the years 2017-18, 2018-19, 2019-2020 and 2020-2021 was obtained vide ONLINE APPLICATION ID 109791 on 27.02.2021, only after the application format was finalized in the PCB website. The Delay was unintentional and beyond the control of the Hospital authority.</p> <p>NWR:- DRH/Bikaner:- Delay and discontinuity in Authorization /Renewal has already been done with payment of due fees for all previous years including period from 01.07.2015 to 13.02.2017 as per norms (with reference letter no. 80/med/LGH/biomedical</p>	<p>SR- The fact remains that CFO and authorisation for handling BMW are yet to be obtained by RH/PER.</p>
--	--	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------------------------------

		<p>waste management , reply of same query have been sent to office of SR. Divisional Audit Officer dated. 21.06.2021).</p> <p>SR:- Railway Hospital/ Perambur:- The point under observation is delay of 36 months as observed during the 03 year period from 2017 to 2020.The initial issue for Consent to Operate (CTO) under Prevention of Pollution (Air &Water) and the BMW authorization was valid till 31 Mar 2017 and an application for renewal was sent 01 month prior to expiry i.e. Feb 2017 as per TNPCB guidelines. The same was processed and later issued with a renewed consent on 20 Aug 2018 which was valid till 31 Mar 2019 (07 months). It is only after receiving the Consent to operate (CTO) under Prevention of Pollution Act (Air &Water) can an application for BMW Authorisation be initiated/submitted as a copy of valid CTO should be attached along with the</p>	
--	--	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--

		<p>application. During the intervening period of 07 months an application for BMW authorization was submitted and by the time it was to be issued from TNPCB the CTO expired on 31 Mar 2019 Due to the delay by TNPCB. So the period from 01 Apr 2017 to 31 Mar 2019 there was no BMW authorization from TNPCB. Again the same process of obtaining CTO was initiated in Feb 2019 and the CTO issued on 12 Jul 2019 valid till 31 Mar 2020 (08 Months). Again the BMW application was put to TNPCB but then getting the order for BMW authorization from TNPCB was delayed and CTO expired in March 2020. The previous Consent to Operate was again applied in Feb 2020 and renewed CTO was issued on 28 Jul 2021 valid till 31 Mar 2022 (08 Months). Post receipt of the CTO a fresh application for BMW authorization had been sent and it was returned seeking for more information. The same has</p>	
--	--	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--

		<p>been uploaded and re-submitted on 07 Jan 2022 and by 31 Mar 2022 the previous consent also expired. Even though the process of obtaining the BMW authorization has been done diligently in advance, it is the issue of obtaining CTO from TNPCB which is time consuming and little time frame left for applying and receiving of BMW authorization. Now the issue is taken seriously and being followed closely.</p> <p>SCR:- DRH/Vijayavada:</p> <p>- Since its beginning is not having authorization from APPCB/BZA . However obtaining the license for Authorization from APPCB/BZA is under process , there was a delay in obtaining the Authorization as RH/BZA is having a 30 KLD STP Tank which is not in compliance as per the APPCB/BZA Authorities, APPCB/BZA has advised to built a 300 KLD STP tank at RH/BZA and apply for Authorization. Now a</p>	
--	--	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--

		<p>300 KLD STP tank has been constructed and commenced at RH/BZA. Consequently, fees details to be paid towards Authorization has been obtained from APPCB/BZA and paid to APPCB/BZA and waiting for issue of license.</p> <p>Central Hospital /Lallaguda:- Process for renewal of authorization was initiated on 28-02-2014 by paying Rs 45,000 in the form of DD no 721654 dt :28-02-2014 payable to member secretary APCCB but after bifurcation of Andhra Pradesh State into Andhra Pradesh & Telangana. No communication was received from State Authorities for handling Bio-Medical waste has been completed and paid Rs 15 Lakh on 01-07-2022 TSPCB has yet to be issued Authorization.</p> <p>SER:- Previous authorization of DRH/KGP expired on 31.03.2019. On-time renewal application vide application no.</p>	<p>SECR- During the course of verification of the ATN it was noticed that Authorization Certificate was not given by Chhattisgarh Pollution Control Board to Central Hospital/Bilaspur for the period from 06.10.2020 to 05.10.2022 due to non-submission of copy of Water and Air consent by the Hospital. It was further observed that the same was not previously obtained by the Hospital</p>
--	--	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

		<p>bwa000000020261 dt.28.03.2019 has been uploaded on WBPCB's website. Reminder sent on 16.4.2019, 13.07.2021, 09.11.2021 and 10.02.2022. After pursuing the matter with WBPCB office, further renewal application vide application no. 2149733 dated 31.05.202 has been uploaded on WBPCB's new website which has been returned with 'Scrutiny query'. The queries including setting up of ETP at DRH/KGP is being complied. However contract for disposal of BMW waste generated at DRH/KGP is renewed from time to time through the authorized agency of WBPCB and current contract is valid till 11.03.2023.</p> <p>SECR:- Correspondence has been made with Chhattisgarh Pollution Control Board, by Medical Director/Central Hospital/Bilaspur for Authorization period from 06.10.2012 to 05.10.2020. In this context,</p>	<p>Authority and for obtaining the water and air consent application was being submitted to SPCB.</p> <p>This shows lack of awareness regarding statutory provisions of BMW act and rules. Present status may be provided.</p>
--	--	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

		<p>Chief Chemist, Chhattisgarh Pollution Control Board, New Raipur letter No. 2021 02-02-2021 stated that Authorization of Central Hospital/SEC Railway, Bilaspur is valid upto 05.10.2020. However, renewal fees for Rs. 40,000/- (Rupees Forty Thousand only) period from 06.10.2020 to 05.10.2022 for two years may be deposited through online for further process of case. The renewal fees of Rs. 40,000/- for Authorization Certificate for Central Hospital/Bilaspur period from 06.10.2020 to 05.10.2022 is concurred by PFA/SECR vide letter No. HQ/SECR/Fin/Misc-15180 dated 31.01.2022 and it is under process for payment to Regional Officer, CG Environment Conservation Board, Bilaspur.</p> <p>SWR:-CH/Hubli:- Due to change in submission from Offline to Online, there was delay in obtaining the authorization. As the Central Hospital, Hubli has</p>	<p>WR- In case of DRH Ratlam, acceptance by SPCB may be pursued for receiving the authorisation without further delay and progress advised to Audit</p>
--	--	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------

		<p>entered into contract with M/s Rio Green Environ India ASTS, The waste generated at CH/UBL is being disposed regularly.</p> <p>WR:- Jagjivan Ram Hospital, Mumbai Central (JRH):- ETP plant is mandatory condition in renewal application. Due to pending compliance of ETP plant the application for renewal could not be done till 2018. Since 2018 the application mode changed to online mode by BMC, but Govt entity was not added in the online application by MPCB, hence Online application could not be submitted. Finally in Sept 2019 online application submitted for water consent which is mandatory for Authorization of BMW. Online Fees paid on 30/11/2019.</p> <p>Now Pollution Control Board has approved the Authorization in CC Meeting, e-mail to this effect has been received and certificate will be issued shortly.</p>	<p>WCR-reply may be furnished about delay/discontinuity at DRH/Kota & SDRH/NKJ.</p>
--	--	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------------

		<p>DRH/Ratlam:- A fresh application for authorisation for handling biomedical waste has been applied which is accepted by the state pollution control board.</p> <p>DRH/Rajkot:- There was no discontinuity.</p> <p>WCR:- All the Health establishment of WCR have been applied for authorisation/registration to SPCB for handling of BMW. Due to non completion of Sewage treatment plant at Central Hospital/Jabalpur extension has not been given by SPCB for handling of BMW.</p> <p>Kasturba Gandhi Hospital Chittaranjan (CLW):- Previous Authorization was valid up to 31.12.2016. An online application for renewal of Bio-medical waste Authorization for five years was submitted on 10.12.2016 and feedback received from WBPCB on 16.02.2017 to submit application in hard copy</p>	<p><i>MoR, in their reply, have explained the reasons for delay/discontinuity in authorization; however, fact remains that there was delay/discontinuity. Replies to observations raised by ZR may please be furnished.</i></p>
--	--	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

		<p>with all relevant documents. Accordingly Application was submitted to WBPCB on 27.02.2017 and Authorization was granted on 07.04.2017 with validity up to 31.12.2021. Again an online application has been submitted through online on 01.11.2021. After scrutiny by WBPCB, hard copy of application was submitted at WBPCB on 24.02.2022 and Authorization was granted on 29.04.2022 with validity up to 31.12.2026. No delay occurred from KGH/CLW side. However, renewal applications will be submitted well in advance in future.</p>	
<p>5.3 Creation of infrastructure in hospitals for handling of bio-medical waste</p>	<p>Rule 4 of the BMW Rules prescribed for taking all necessary steps to ensure that bio-medical waste is handled without any adverse effects to human health and the environment. These rules also prescribed that a facility for a safe, ventilated and secured location for storage of such waste in coloured bags in containers should be provided within the hospital premises. The bio-medical waste from such locations</p>	<p>Details are attached at Annexure 5.3 <u>Creation of infrastructure for handling Bio-Medical Waste:-</u> CR:- JRH/Byculla:- Installation of ETP is under process. DRH/Kalyan:- There is secured room for collection of Bio Medical Waste in the hospital, near Oxygen plant. ETP/STP under</p>	<p>CR- There is a secure room for collection of Bio-medical waste in old</p>

	<p>shall be directly transported to the common bio-medical waste treatment facility⁶⁴ for appropriate treatment and disposal. Rule 4(k) prescribed that hospital authorities should ensure treatment and disposal of liquid waste in accordance with the Water (Prevention and Control of Pollution) Act, 1974, which, <i>inter-alia</i>, included provision of effluent treatment plant (ETP)/ sewage treatment plant (STP).</p> <p>Examination of the related records pertaining to the infrastructure created for handling Bio-Medical waste revealed the following: -</p> <ol style="list-style-type: none"> Provision of secured room for storage of bio-medical waste did not exist in 46 hospitals (Annexure- 5.3) in 14 zones, Provision of ETP/STP was not made for treatment of liquid waste in 54 hospitals (Annexure- 5.3), No specific reasons for such non-creation of infrastructure could be ascertained. <p>This clearly indicated the poor level of efficacy in monitoring such important environmental aspects. The resultant ill effects on the health of hospital employees as well as on the patients visiting the</p>	<p>process pending at Engineering end.</p> <p>DRH/Nagpur:- Secured storage room for hospital generated Bio Medical waste is available. STP/ETP is not available.</p> <p>SDRH/Igatpuri:- There is a secure room for collection of Bio-medical waste in old building of SDH/Igatpuri. SDH/IGP is a 20 bedded hospital with nominal bed occupancy of 5-10. The quantum of BMW generated is very minimal which is pretended and disposed.</p> <p>SDRH/Kurudwari :- There is a secured room for collecting Bio medical waste in the hospital.</p> <p>ER:- B.R.Singh Hospital/Sealdah:- ETP at BRSH/SDAH is under process.</p> <p>DRH/Hawrah:- ETP at DRH/HWH is under process.</p> <p>SDRH/Andal:- ETP at SDRH/UDL is under process.</p>	<p>building of SDH/Igatpuri. ETP/STP for treatment of liquid waste is under process and pending at engineering end.</p> <p>ER-</p> <p>In respect of Workshop Hospital, Liluah, it may please be confirmed whether liquid chemical waste was being disposed of through Municipal Sewerage system after pre-treatment or neutralization.</p>
--	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

	<p>hospitals coming in contact of such bio-medical wastes could not be ruled out.</p> <p>MoR in reply is stated (May 2022) to have provided secured room for storage of Bio-Medical Waste and ETP/STP for treatment of liquid chemical waste but no evidence/document in support of their claim was given.</p> <p>-----</p> <p>64 Any authorized treatment facility by SPCB within a distance of 75 Kilometres</p>	<p>Workshop Hospital Liluah:- System of drainage is already established in coordination with Local Municipality. But ETP is available beside North tank Liluah, C&W Workshop. Waste water is going through ETP.</p> <p>ECR:- Central Super Speciality Hospital Patna (CSSH)/Patna:- No infrastructure created as disposal of Bio-Medical waste, it is in contract with IGIMS/Patna.</p> <p>DRH/Danapur:- Already DRH/DNR engaged IGIMS, CBWTF, Patna for disposal of Bio-waste. However, DRH/DNR will take efforts to create infrastructure as per rule.</p> <p>SDRH/Gaya:- Secured room is available for storage of BMW in hospital. No need of ETP/STP, because only 3 to 4 patients are admitted in indoor ward of this hospital.</p> <p>ECoR:- In DRH/Waltair suitable Bio-medical disposable room is</p>	
--	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--

		<p>available where Bio-medical waste bags, received from Hospitals, are stored before transportation by agency.</p> <p>NR:- DRH/Moradabad:- There is a provision of separate room for the storage of BMW. ETP& STP plant are not available. Proposal for construction of ETP & STP is under process.</p> <p>DRH/Ambala Cant:- BMW is stored under Lock& Key before handling over to CBWTF for treatment & disposal. Left over laboratory waste like blood samples/urine etc are treated with 1% Hypochlorite solution before disposal in drains. Proposal for installation of ETP is under process with Engg. Deptt. since March, 2017. No in-house treatment collection, treatment & disposal of highly infectious BMW is done at DRH/UMB. All the BMW is handed over to common waste treatment facility (Rudraksh Enviro Care Pvt. Ltd.) authorised</p>	
--	--	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--

		<p>by HSPCB.</p> <p>SDRH/Amritsar:- BMW is stored under Lock& Key before handling over to CBWTF for treatment & disposal. Left over laboratory waste like blood samples/urine etc are treated with 1% Hypochlorite solution before disposal in drains. Proposal for installation of STP is under process with Engg. Deptt. since June, 2019.</p> <p>SDRH/Anand Vihar:- SDRH/ANVT is not Sub Divisional Hospital. It is a non bedded health care facility providing OPD services and there is no in-house lab facility. The BMW generated in HU/ANVT is stored at the site of generation in injection/dressing room and in doctor,s OPD (in colour coded dustbins) . Separate secure room for BMW storage as per guidelines for non-bedded health care facility has been setup at Health Unit/ANVT. No ETP/STP is needed for HU/ANVT as per BMW</p>	
--	--	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--

		<p>rule 2019.</p> <p>Jagadhari Workshop hospital:- Provision of secure room available for storage of BMW. STP is functioning at Jagadhari Workshop.</p> <p>NCR:- Creation of infrastructure at hospitals for handling of Bio-medical Waste:- The BMW is handled separately at a secured location away from patients and Health care worker in separate colour code containers. STP is available in Central Hospital, Prayagraj.</p> <p>NER:-</p> <p>CH/LNMRH/Gorakhpur :- Secured room for storage of BMW has been prepared. Now the secured room for storage of BMW is available. ETP/STP for treatment of liquid waste is not available.</p> <p>DRH/Varanasi, SDRH/Gonda & Mechanical Workshop Hospital /Gorakhpur:- BMW is disposed by outsourced agency on daily basis.</p>	<p>DRH/Katihar: Required authorization from SPCB obtained in DRH/KIR. Secure room for storage of BMW under Rule-4 of BMW Rules was not available. Effluent Plant for Liquid Chemical Waste was being procured. Infection Control Committee was formed in DRH/KIR.</p>
--	--	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

		<p>Hence secured room is not required. ETP/STP for treatment of liquid waste is not available.</p> <p>NFR:- DRH/ Dibrugarh Town:- Secured room for store of BMW: Room for storage of BMW before collection by the authorized agent.</p> <p>ETP/STP for treatment of liquid waste: Being processed by Mechanical Engineering Department of Tinsukia Division.</p> <p>DRH/Katihar:- Divisional Railway Hospital/KIR has already taken requisite authorizations from the SPCBs. There was no delay or discontinuation in this matter.</p> <p>All requisite provision in BMW rules for treatment of the Bio-Medical waste are being complied, effluent plant for liquid chemical waste is under process of procurement.</p> <p>The infection control committee is already formed at DRH/KIR who is monitoring work of BMW.</p> <p>SDRH/Rangiya:- N.F</p>	<p>SDRH/Rangiya: Proposal for construction of a secure room for storage of BMW as per norms was under process. Construction of ETP/STP was under process. Liquid Waste was not treated in SDRH/RNY and provision for the same was under process. Present status may be furnished.</p>
--	--	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

		<p>Railway Hospital at Rangiya is a 25 bedded Hospital with IPD & OPD Facilities only, without any operation theatre and labour room. As there is no specialist doctor posted at Rangiya, bed occupancy is very low, also it is close to the Central Hospital, Maligaon where specialty management are available, average foot-fall to the hospital is on the lower side. So, total amount of hospital waste generated is less and generated dry waste handled by the department staff and disposed as per extant rule. Pollution Control Board, Assam had been approached for authorization to handle Bio-Medical waste at Rangiya and the Board supplied with an extensive list of prerequisite administrative and infrastructural issues which are being addressed by the Railway administration, these are lengthy procedure and would require six to twelve months time.</p>	<p><i>SDRH/New Jalpaiguri:</i> One room was provided for storage of BMW. ETP/STP was not provided in the Hospital. Liquid waste was not treated under Rule 4(k).</p>
--	--	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------

		<p>SDRH/New Jalpaiguri:- Secured room for storage of BMW:A letter has been issued to ADEN/I/NJP for making a new room for storage of BMW. However, at present one room in IPD complex for storage of BMW. ETP/STP for treatment of liquid waste: Proposal has been sent to Engg. Department for making collection tank for ETP/STP of liquid waste.</p> <p>NWR:-CH/Jaipur :- BMW collected from all wards, ICU and OT of Central Hospital were kept in a secured room and STP for treatment of liquid waste situated in Ganpati Nager Railway Colony at Road No.1.</p> <p>SDRH/Bandikui:- One small room has been specified for bio-medical waste storage. Sub-divisional Hospital bandikui is having very small 10 bedded hospitsls therefore bio-medical wasted in segregated in colored begs as per</p>	
--	--	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--

		<p>guideline and disposed through outsourced agent .No liquid waste is generated hence additional infrastructure (ETP/STP) creation is not required. Liquid waste quantity is negligible at SDRH Bandikui therefore liquid waste is disposed off by deep burial in ground.</p> <p>DRH/Bikaner:- Regarding the creation of infrastructure at hospital for handling of biomedical waste There is temporary secured room for keeping and storing biomedical waste and the process of permanent secured room has been under process.</p> <p>SDRH/Abu Road:- For day to day collection of Bio Medical waste (BMW) by outsourced agency (CBMWTF) a secured storage facility has been designated in hospital premises to handle Bio-Medical waste as per norms along with sign boards.</p> <p>DH/LGN/BKN:- There is temporary secured room for keeping and storing BMW and the process of</p>	<p>SR- Reply of MoR is not accepted. ETP in RH/PER is not working.</p> <p>There is no ETP at DRH/GOC. Only a waste water tank is available, where waste water is stored and ‘Sodium hypho chloride’ is added for treatment of BMW.</p>
--	--	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

		<p>permanent secured room has been under process. For day to day collection of BMW by outsources agency, a secured storage facility has been designated in hospital premises to handle BMW as per norms. Proposal for creation of ETP/STP will be processed soon through Engineering Department. Presently the liquid waste of the hospital is being disposed of after pre-treatment in a two chamber septic tank with a lined soak away pits.</p> <p>SR:- CH/Perambur:- ETP was established in July-2020 and the liquid waste from the laboratory and hemodialysis unit are treated and sent to STP for further treatment.</p> <p>DRH/Goldan Rock:- Effluent Treatment Plant - I: The Liquid waste generated from the Clinical Laboratory is pre-treated before disposal as per Biomedical Norms. Effluent Treatment Plant – II: The Liquid waste generated from the Labour and Gynae ward is pre-</p>	<p>MoR has accepted that pre-treatment of liquid BM waste is not carried at DRH/AJJ.</p> <p>There is no ETP at SDH/Podanur. Only waste-water tank is available, where waste-water is stored and ‘Sodium hypochloride’ is added for treatment of BMW.</p> <p>There is no ETP at SDH/Villupuram. Only waste-water tank is available, where waste-water is stored and ‘Sodium hypochloride’ is added for treatment of BMW.</p>
--	--	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

		<p>treated before disposal as per Biomedical Norms.</p> <p>The liquid waste from Operation Theatre complex is being pre-treated at ETP - II before disposal as per Biomedical Norms.</p> <p>DRH/Arakkonam:- There is a secure ventilated room for storage of Bio-Medical waste at DRH/AJJ, since 2015. Pre-treatment of liquid waste is not carried out at DRH/AJJ at present. The engineering department has been informed in writing regarding the requirement ETP/STP on an urgent basis. Copy of letter enclosed.</p> <p>SDRH/Podanur:- A Secured room for storage of BMW is provided. ETP plant is available at SDH/Poathanur to collect lab waste.</p> <p>SDRH/Villupuram:- Secured room for storage of BMW: Biomedical waste segregated at SDH/Villupuram are being stored in a Secured room before collection by Tamilnadu waste</p>	
--	--	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--

		<p>management limited. ETP for treatment of liquid waste: Effluent treatment tank has been constructed and effluent from Lab is being treated before disposal.</p> <p>SCR:- DRH/Nanded:- Have initiated the process at the non-conformities will be rectified in due course.</p> <p>SDRH/Purna:- Have initiated the process at the non-conformities will be rectified in due course.</p> <p>SER:- Secured room for storage of BMW at DRH/KGP, DRH/ADRA & SDRH/TATA are available.</p> <p>CH/GRC:- ETP/STP for treatment of liquid waste at CH/GRC is Under process by Engg Department & Job order issued.</p> <p>DRH/KGP — Establishment of ETP is under process in collaboration with Engineering Department (Joint inspection done at Supervisor level of Engg, Elect & Water works).</p> <p>DRH/ADRA:- Provision of ETP/STP was not made</p>	
--	--	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--

		<p>for treatment due to no liquid chemical waste generated in hospital at present.</p> <p>SDRH/TATA: – Under process.</p> <p>SECR:-- Provision of secured room for storage of Bio-Medical Waste available at Central Hospital/Bilaspur, Divl. Railway Hospital/Raipur and Sub. Divl. Hospital/Bhilai Marshalling Yard (BMY). Bio Medical Waste generated from this hospital, segregated and kept in coloured bags in secured room which are collected by the authorized agency for safe disposal. Liquid Waste Treatment Plant is available at Central Hospital/SEC Railway, Bilaspur and it is under AMC from 02.08.2021 to 01.08.2022. New AMC Tender has been opened and LOA will be issued shortly.</p> <p>Proposal for ETP/STP at Divl. Railway Hospital/Raipur and Sub. Divl. Railway</p>	<p>WR- Necessary coordination may be ensured with Engineering Dept for construction of storage facility of BMW at SDRH Valsad.</p> <p>In respect of DRH, Rajkot action may be taken for provision of ETP/STP for proper disposal of liquid waste at the earliest. Progress in this regard may be apprised to Audit.</p>
--	--	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

		<p>Hospital/Bhilai Marshalling Yard has been sent to DEN III/Raipur for Construction, Erection & Commissioning of Bio Medical Liquid Waste Treatment Plant vide CMS/Raipur letter No. CMS/R/Medical/2022/188 dated 23.06.2022 and for Sub. Divl. Railway Hospital/Bhilai Marshalling Yard vide ACMS/BMY letter No. ACMS/Medical/BMY/2022/787 dated 03.08.2022 which is under process.</p> <p>SWR:- DRH/Mysuru:- Secured room for storing BMW has since been earmarked to ensure that BMW is stored without any adverse impact.</p> <p>WR:- DRH/Ratlam:- A central waste yard had been constructed for storage of waste.</p> <p>DRH /Rajkot:- Room for storage of BMW available. ETP/STP for treatment of liquid waste is not available.</p> <p>SDRH/Valsad:- Repeated requests sent to ADEN/BL</p>	<p>WCR- Provision of ETP /STP at SDRH/NKJ & GGC needs to be expedited.</p> <p>.</p> <p>.</p> <p>BLW- Yes secured room for storage of BMW has been constructed and ETP/STP is still under process and is pending with the civil department</p> <p>CLW- The test report of WBPCB on the check of water released at the end</p>
--	--	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

		<p>& DEN(N) on 23/06/21 & 07/05/22 for construction of fencing wall and separate room for bio medical waste. Pre-treatment of BMW with hypochlorite solution is being been done as per the guidelines.</p> <p>Workshop</p> <p>Hospital/Dahod:- Common STP Available for the Hospital and Railway Colony Liquid Waste.</p> <p>WCR:- SDRH/New Katni Jn. & SDRH/Gangapur City:- In SDRH/New Katni Jn. & SDRH/Gangapur City infrastructure establishment is under process.</p> <p>Metro Railway/Kolkata:- Tapan Sinha Memorial Hospital Metro Railway/ Kolkata has separate BMW storage room and infrastructure is available for basic pre-treatment liquid waste.</p> <p>Banaras Locomotive Works Hospital/Varanasi (BLW):- Secured room for storage of BMW was constructed in 30.06.2021 post Audit period. ETP/STP for treatment of</p>	<p>of STP after treatment was issued on 11.10.22 from WBPCB with remarks ETP exists and without any adverse remarks.</p> <p><i>MoR have stated that creation of infrastructure for handling BMW, in the hospitals pointed out by audit, is under process. However, this needs to be expedited not only in selected</i></p>
--	--	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

		<p>liquid waste is under process and is pending with design department as per discussion with civil department. Reminder letter has been sent Chief Engineer BLW.</p> <p>Kasturba Gandhi Hospital Chittaranjan (CLW):- A secured and well ventilated room is available in Hospital premises for storage of bio-medical waste since long and cleared regularly. After pre-treatment of liquid waste(generated from KGH) with 1% hypochlorite solution, is directly discharged in to underground sewer and carried to modern STP through water carriage system for further treatment. STP is maintained by CLW Civil Engg. Deptt.</p> <p>Rail Wheel Factory/Yelahanka/Bengaluru (RWF):- ETP is existing in RH/RWF which was functioning manually. Installation of semi automatic ETP at RH/RWF</p>	<p><i>hospitals but in all the health care facilities.</i></p>
--	--	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------

		in co-ordination without side agency, Civil Dept and Electrical dept of RWF is under process.	
5.4 Pre-treatment of bio-medical waste before its storage	<p>Rule 4, Schedule-I and Form-II of the BMW Rules prescribed for pre-treatment of bio-medical waste before its storage. Such waste includes laboratory waste, microbiological waste, blood samples, blood bags and other clinical laboratory waste. Schedule-I of the Rules also prescribed the method of treatment for each type of the waste corresponding with the manner as prescribed by the World Health Organisation (WHO) or National AIDS Control Organisation (NACO) guidelines. These types of waste, after pre-treatment, were to be packed and sent to the common bio-medical waste treatment facility for final disposal.</p> <p>Audit evaluated the status of pre-treatment of different bio-medical waste in the selected railway hospitals and observed the following: -</p> <ol style="list-style-type: none"> Pre-treatment of laboratory waste was not carried out in 13 hospitals in five zones. Required pre-treatment of micro- 	<p>Details are attached at Annexure 5.4</p> <p><u>Pre-treatment of BMW before its storage:-</u></p> <p>CR:- SDRH/Igatpuri:- All laboratory waste is pre-treated/disinfected in Sodium Hypochlorite Solution on site before packing and sending and common BMW treatment facility. It is disposed and collected by nominated agency of NMC. Microbiological waste and blood bags related wastes are not generated in this hospital.</p> <p>ER:- B.R.Singh</p> <p>Hospital/Sealdah:- Noted and shall be followed.</p> <p>DRH/ Howrah:- Microwave Based Disinfection System (OPTIMASER-30) has been installed at DRH/HWH on 20.07.2021. This system is for pre-treatment of the Bio-</p>	

	<p>biological waste was not done in 13 hospitals in six zones.</p> <p>iii. Pre-treatment of blood samples was not carried out in the case of 15 hospitals in seven zones. Similarly, specified pre-treatment of blood bags were not done in 18 hospitals in eight zones.</p> <p>iv. Required pre-treatment of other clinical laboratory waste was not carried out in 14 hospitals in seven zones.</p> <p style="text-align: center;">(Annexure 5.4)</p> <p>Thus, the stipulations contained in the BMW Rules for pre-treatment of bio-medical waste were not effectively complied with. The resultant adverse impact of non-compliance of the prescribed procedure on the health of the hospital staff, patients and visitors exposed to such waste cannot be ruled out.</p> <p>MoR in its reply (May 2022) stated that Railway hospitals are ensuring pre-treatment of Bio-medical waste before storage. Reply is not acceptable as MoR did not furnish any document supporting the veracity of their claim.</p>	<p>medical waste generated at DRH, HWH before handing over to the Agency for final Disposal.</p> <p>SDRH/Andal:- Noted and shall be followed.</p> <p>Workshop Hospital/Liluah:- As per the present ongoing norms all such items are put into 01% Hypochlorite solution, then only packed and disposed of, through contractual agency.</p> <p>ECR:-DRH/Danapur:- Pre-treatment of Bio-Medical waste is being done with available resources like autoclave. Necessary correspondence for Lab is being done as per rule.</p> <p>DRH/Sonpur:- BMW is stored in identifiable coloured containers yellow/red/white (Translucent)/blue before disposal by Agency after proper segregation.</p> <p>SDRH/Gaya:- Laboratory waste, Microbiological waste, Blood Samples, Blood bags and other</p>	
--	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--

		<p>laboratories waste are being disposed of done manually, less than 10 patients are investigated daily.</p> <p>NR:-</p> <p>DRH/Moradabad:- Pre treatment of Laboratory waste is done with 1% Sodium Hypochlorite solution. No Microbiology lab available. There is no need for microbiological treatment. Blood samples are being pre-treated with Hypochlorite solution and disposed into the drains. Required pre-treatment of other clinical lab waste is being done as per BMW management protocol.</p> <p>SDRH/Anand Vihar:- SDRH/ANVT is not Sub Divisional Railway Hospital. It is a non bedded health care facility providing OPD services and there is no in-house lab facility. As HU/ANVT has no working laboratory and no microbiological and clinical lab waste is generated hence. Hence pre-treatment is not required. BMW is collected and stored in coloured</p>	
--	--	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--

		<p>coded bags and containers and handed over to CBWTF for disposal.</p> <p>SDRH/Amritsar:- Blood bags are handed over to CBWTF, Amritsar (Enviro care Pvt. Ltd.) authorised by PPCB.</p> <p>NFR:- DRH/Katihar:- Divisional Railway Hospital/KIR has already taken requisite authorizations from the SPCBs. There was no delay or discontinuation in this matter.</p> <p>All requisite provision in BMW rules for treatment of the Bio-Medical waste are being complied, effluent plant for liquid chemical waste is under process of procurement.</p> <p>The infection control committee is already formed at DRH/KIR who is monitoring work of BMW.</p> <p>SDRH/Rangiya:- N.F Railway Hospital at Rangiya is a 25 bedded Hospital with IPD & OPD Facilities only, without any operation theatre and labour room. As there is no</p>	
--	--	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--

		<p>specialist doctor posted at Rangiya, bed occupancy is very low, also it is close to the Central Hospital, Maligaon where speciality management are available, average foot-fall to the hospital is on the lower side. So, total amount of hospital waste generated is less and generated dry waste handled by the department staff and disposed as per extant rule. Pollution Control Board, Assam had been approached for authorization to handle Bio-Medical waste at Rangiya and the Board supplied with an extensive list of prerequisite administrative and infrastructural issues which are being addressed by the Railway administration, these are lengthy procedure and would require six to twelve months time.</p> <p>SECR:- Pre-treatment of Laboratory Waste at Sub. Divl. Railway Hospital, Bhilai Marshalling Yard is done using hypochloride before dispose.</p>	
--	--	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--

		<p>Pre-treatment of Blood Samples is done using hypochloride solution before dispose. No blood transfusion is done at Sub. Divl. Railway Hospital/Bhilai Marshalling.</p> <p>Pre-treatment of other Clinical Laboratory Waste is done at Sub. Divl. Railway Hospital/Bhilai Marshalling Yard using hypochloride solution before dispose.</p> <p>SWR:- CH/Hubli:- Liquid waste management system is working at Lab and pre-treatment of all liquid waste is done. Pre-treatment of all liquid waste is done. Pre-treatment with Hypochlorite solution for desirable time is ensured before disposal of all liquid waste to the drainage system. Microbiological wastes are pre-treatment with Hypochlorite solution as per BMW guidelines. Glass items disinfected with hot air oven at lab which is in working condition. Blood samples</p>	
--	--	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--

		<p>are segregated in Red coloured bags and then processed further as per BMW Guidelines. Blood bags are autoclave and then processed further for disposal as per BMW guidelines. All other waste like cotton, gloves, face masks, anatomical waste etc. are segregated in coloured bin bags and sent to BMW storages area for further disposal as per BMW guidelines. Needle burner / cutter is available in lab and is properly utilized.</p> <p>DRH/Mysuru:- The pre-treatment of Laboratory waste, Microbiological waste, Blood samples, Blood bags and other clinical Laboratory waste is done by disinfecting the waste as per prescribed rule. Contract has also been awarded to the authorized BMW handlers for disposing the BMW as per the guidelines of SPCB.</p> <p>DRH/MYS:- Pre-treatment of Laboratory waste, microbiological waste,</p>	
--	--	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--

		<p>Blood samples pre-treatment, Blood bags pre-treatment and other clinical laboratories waste is done by disinfecting the waste as per prescribed rules. Contracts have also been awarded to the authorised BMW handlers as per guidelines of SPCB.</p> <p>Metro Railway/Kolkata:- Basic pre-treatment of microbiological, blood samples and other wastes of clinical laboratories are done by sodium Hypochlorite Solution 10% before its storage.</p> <p>Rail Wheel Factory/Yelahanka/Bengaluru (RWF):- Needles are being treated with 1% Sodium Hypochlorite solution. Solid waste are segregated/disposed as per colour code. Other BMW from Lab, blood bags etc was not done as the waste are collected on daily basis by M/s Medicare Environmental Management Pvt. Ltd., the authorised agency.</p>	<p><i>As the Railway Administration has taken steps for pre-treatment of BMW before its storage, there are no further comments to offer.</i></p>
--	--	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------------------------------------------------------------

<p>5.5 Segregation and pre-treatment of liquid chemical waste</p>	<p>As prescribed in Rule 4 and Schedule-I & III of the BMW Rules, the liquid chemical waste should be segregated at source and its pre-treatment has to be carried out in accordance with the Water Act prior to its mixing with other waste water so that the combined discharge should conform to the prescribed norms. Scrutiny of related record on compliance to this provision revealed the following: -</p> <ol style="list-style-type: none"> 1. Segregation of liquid chemical waste, as specified in the Rules, was not carried out in 22 hospitals in nine zones. 2. Treatment of liquid waste was not done as prescribed in the Water Act in 29 hospitals in 12 zones (Annexure-5.5). <p>Thus, the statutory provisions for safeguard of health of hospital staff, patients and visitors in particular and public in general were not effectively complied with due to lack of monitoring on the part of hospital authorities.</p> <p>MoR in its reply (May 2022) stated that Railway hospitals are ensuring segregation and pre-treatment of liquid chemical waste. MoR further added that provision of ETP/STP is being/will be</p>	<p>Details are attached at Annexure 5.5</p> <p><u>Segregation and pre-treatment of liquid chemical waste:-</u></p> <p>CR:- SDRH/IGP:- Liquid chemical waste is segregated at the point of segregation and pre treated with sodium hypochlorite.</p> <p>ER:- B.R. Singh Hospital/ Sealdah, DRH/Hawrah and SDRH/Andal:- :- Segregation of and pre-treatment of liquid chemical waste:- Noted and shall be followed.</p> <p>Workshop Hospital Liluah:- Noted and shall be followed. As per the present on going norms all such items are put into 01% Hypochlorite solution, then only packed and disposed of, through contractual agency.</p> <p>ECR:- CSSH/Patna :- Stored in container and treated with proper disinfectant for one hour before discharging into hospital sewer line.</p> <p>DRH/Danapur:- With the help of IGIMS, Patna, we are managing it, but DRH/DNR will follow</p>	
--------------------------------------------------------------------------	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--

	planned.	<p>recent guidelines also.</p> <p>DRH/Sonpur:- Stored in contained and treated with proper disinfectant for one hour before discharging into hospital sewer line.</p> <p>SDRH/Gaya:- Liquid chemical waste is being available for treatment. Now, it will be duly followed.</p> <p>NR:- DRH/Moradabad:- No chemicals are being used & all machines are auto analysers.</p> <p>Pre treatment of liquid waste are being done with Hypochlorite solution before disposal but there is no ETP& STP plant yet.</p> <p>DRH/Ambala Cant:- Left over laboratory waste like blood samples/urines etc are segregated at the source of generation and treated with 1% Hypochlorite before disposal of drains. Proposal for installation of ETP is under process with engineering department since 2017.</p> <p>SDRH/Amritsar:- Left over laboratory waste like blood samples/urines etc are segregated at the source</p>	
--	----------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--

		<p>of generation and treated with 1% Hypochlorite before disposal of drains. Proposal for installation of STP is under process with engineering department June, 2019.</p> <p>SDRH/Anand Vihar:- SDRH/ANVT is not Sub Divisional Railway Hospital. It is a non bedded health care facility providing OPD services and there is no in-house lab facility. As HU/ANVT has no working pathology laboratory, only liquid waste generated is the disinfectant and washing fluid which is disposed in Yellow coloured container in yellow bag and handed over to CBWTF for disposal.</p> <p>Jagadhari Workshop Hospital:- Such type of BMW is not generated here.</p> <p>NCR:- Segregation and pre-treatment of liquid chemical waste:- Segregation and pre-treatment of Laboratory waste is segregated at source and pre-treatment is</p>	<p>NCR- ETP/STP has not yet been installed in Sub-divisional Hospital Kanpur.</p> <p>In Divisional Hospital, Agra segregation and pre-treatment of bio-medical waste is being done by outsourced agency.Steps taken towards resolving the issues may be furnished.</p>
--	--	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

		<p>carried out with disinfectants prior to its disposal at central Hospital, Prayagraj, Sub-divisional Hospital, Kanpur and Divisional Hospital Agra. In Radiology department, we have Digital X-rays machines in all above 03 hospitals, no more developing films. STP is available in Central Hospital, Prayagraj. Provision of ETP/STP in other hospitals is being planned by respective in charges.</p> <p>NER:- DRH/Varanasi:- Segregation of liquid chemical waste is being done. Treatment of liquid waste is being carried out as per water act.</p> <p>NFR:- DRH/Dibrugarh Town:- The Divisional Railway Hospital/DBRT does not produce or discharge Liquid Chemical Waste.</p> <p>DRH/Katihar:- Divisional Railway Hospital/KIR has already taken requisite authorizations from the SPCBs. There was no delay</p>	<p>NFR- DRH/Dibrugarh Town: Pre-treatment of Liquid Chemical Waste done with Hypochlorite Solution/Bleaching Power.</p>
--	--	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------------------------------------------

		<p>or discontinuation in this matter.</p> <p>All requisite provision in BMW rules for treatment of the Bio-Medical waste are being complied, effluent plant for liquid chemical waste is under process of procurement.</p> <p>The infection control committee is already formed at DRH/KIR who is monitoring work of BMW.</p> <p>SDRH/Rangiya:- N.F Railway Hospital at Rangiya is a 25 bedded Hospital with IPD & OPD Facilities only, without any operation theatre and labour room. As there is no specialist doctor posted at Rangiya, bed occupancy is very low, also it is close to the Central Hospital, Maligaon where speciality management are available, average foot-fall to the hospital is on the lower side. So, total amount of hospital waste generated is less and generated dry waste handled by the department staff and disposed as per extant rule. Pollution Control Board,</p>	<p><i>SDRH/New Jalpaiguri:</i> Segregation and pre-treatment of Liquid Chemical waste was not done as per Rule 4.</p> <p>SR- In RH/PER, ETP is not working therefore segregation and pre-treatment of liquid chemical waste is also not being done due to which clearance from TNPCB also has not yet been obtained.</p>
--	--	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

		<p>Assam had been approached for authorization to handle Bio-Medical waste at Rangiya and the Board supplied with an extensive list of prerequisite administrative and infrastructural issues which are being addressed by the Railway administration, these are lengthy procedure and would require six to twelve months time.</p> <p>SDRH/New Jalpaiguri:- A proposal has been made for segregation of liquid chemical waste.</p> <p>NWR:- Sub- divisional hospital Bandikui is having very small set up of laboratory which generates negligible quantity of liquid waste which is disposed off locally by deep burial in ground.</p> <p>SR:- Railway Hospital/Perambur:- 1 & 2. The agenda point was observed by TNPCB and the same was rectified and reply for the same was submitted to TNPCB on 10.02.2020</p> <p>SCR:- Central Hospital</p>	<p>SCR- Documentary evidence was not made available for verification. Same may be provided at the earliest.</p>
--	--	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------------------

		<p>Lallaguda:- Segregation of liquid chemical waste, as specified in the rules is carried out.</p> <p>DRH/Vijayawada:- Segregation of liquid chemical waste, as specified in the rules is carried out. Treatment of liquid waste is done as per prescribed in Water Act.</p> <p>DRHNanded & SDRH/Purna:- Treatment of liquid waste is done as per prescribed in Water Act.</p> <p>SER:- Segregation of liquid chemical waste not carried out:- CH/GRC – Segregation of liquid waste by means of ETP, which is under process for installation by Engg department.</p> <p>Treatment of liquid waste was not done in accordance with the Water act:-</p> <ul style="list-style-type: none"> • CH/GRC – Under process by Engg Department. Job order issued. • SDRH/TATA – 	
--	--	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--

		<p>Under process</p> <p>SECR:- At Sub. Divl. Railway Hospital/Bhilai Marshalling Yard Liquid Chemical Waste is segregated and pre-treated with Chlorination and after disinfection the liquid chemical waste dispose. Treatment of liquid waste was carried out as per rule in accordance with the stipulations prescribed in the Water Act at Central Hospital/Bilaspur. Proposal for ETP/STP at Divl. Railway Hospital/Raipur and Sub. Divl. Railway Hospital/Bhilai Marshalling Yard has been sent to DEN III/Raipur for Construction, Erection & Commissioning of Bio Medical Liquid Waste Treatment Plant vide CMS/Raipur letter No. CMS/R/Medical/2022/188 dated 23.06.2022 and for Sub. Divl. Railway Hospital/Bhilai Marshalling Yard vide ACMS/BMY letter No.</p>	<p>SR- Reply of MoR is not accepted. In RH/PER, ETP is not working therefore segregation and pre-treatment of liquid chemical waste is also not being done</p> <p><i>In the reply MoR have explained the positive steps taken or in process, which needs to be expedited.Replies in response to issues raised by ZR may be furnished.</i></p>
--	--	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

		<p>ACMS/Medical/BMY/2022/787 dated 03.08.2022 which is under process.</p> <p>SR:- The liquid chemical waste generated at various points are treated and disinfected at the initial point of source and then directed to STP for further treatment and disposal.</p>	
<p>5.6</p> <p>Proper storage facility for bio-medical waste (BMW)</p>	<p>As prescribed in Rule 8 of the BMW Rules, the storage of collected bio-medical waste in any hospital should be done in such a way that it is not mixed with any other waste and there should not be any scattering or spillage by animals. Rules also provide that untreated bio-medical waste should not be stored beyond a period of 48 hours. In case it becomes necessary to store such waste beyond the specified period, the prescribed authority (SPCB) be intimated about this along with reasons for doing so. Rule also provide that the containers/ bags in which segregated bio-medical waste is stored, should be labelled as specified in schedule-IV to the BMW Rules. Audit examined the level of compliance of the statutory provisions for proper storage of bio-medical waste and observed the</p>	<p>Details are attached at Annexure 5.6</p> <p><u>Status of proper storage facility of BMW:-</u></p> <p>CR:- SDRH/IGP :- proper storage area/room available with compound wall.</p> <p>ER:- DRH/Hawrah & SDRH/Andal:- Delay has taken place, due care will be taken for no delay in future.</p> <p>Workshop Hospital Liluah:- The bio medical waste is kept in such a way that it is beyond the reach of unwanted people or animal. At present same is complied.</p> <p>No biomedical waste is preserved at this hospital beyond the stipulated time as per the rules of BMW rules. At present proper labelling of container /bag is being done as per BMW</p>	<p>ER- In respect of Workshop Hospital Liluah, review revealed that during 2019-20, in 27 occasions, biomedical waste was not lifted within 48 hours as stipulated in legislative rules.</p>

	<p>following shortcomings. (Details indicated in <i>Annexure 5.6</i>).</p> <ol style="list-style-type: none"> 1. Places for stacking BMW were not fenced to avoid any contact with humans or scattering/spillage by animals in nine hospitals in six zones. 2. Bio-medical waste was stored for more than the prescribed 48 hours in the case of seven hospitals in three zones. No records were made available to indicate if SPCBs was intimated for storage of bio-medical waste beyond the permissible limit. 3. Further, it was also observed that in six hospitals in five zones, the containers/bags used for storing bio-medical waste were not properly labelled as required under the Rules. <p>These important regulations/ stipulations of safe storage of bio-medical waste were meant to ensure that the bio-medical waste is handled and stored properly thereby avoiding human conact. Contrary to the stipulations in BMW Rules, safe storage of bio-medical waste avoiding</p>	<p>rules.</p> <p>ECR:- SDRH/Gaya:- Duly followed and storing BMW in under level properly, CNS directed to inspect Containers/ Bags on daily basis.</p> <p>NCR:- Central Hospital, Prayagraj:- Bio-medical waste is being collected by authorized agency in proper labelled indentified coloured containers/bags, directly from the wards & other places and the same is collected by the person of nominated agency of daily basis.</p> <p>Divisional Hospital, Agra:- Bio-medical waste is being collected by authorized agency in proper labelled identified coloured containers/bags (Red, Blue & Yellow), directly from the wards & other places and the same is collected by the person of nominated agency on daily basis</p> <p>NER:- LNMRH/Gorakhpur & DRH/Varanasi:- BMW Rule 8 is adhered and</p>	
--	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--

	<p>impact on the health of patients, visitors and other public coming in contact with such waste was not adequately ensured. the lack of effective monitoring by hospital authorities resulted in safety issue remaining unaddressed.</p> <p>MoR in its reply (May 2022) brought out that Railway hospitals are ensuring proper storage and labelling of Bio-medical waste. Reply is not acceptable as no evidence/documents in support of the claim was furnished with reply.</p>	<p>complied in Railway hospitals. Containers are properly labelled containing segregated BMW in compliance of statutory provisions for proper storage. The storage area is secured and fenced.</p> <p>NFR:- SDRH/Rangiya:- N.F Railway Hospital at Rangiya is a 25 bedded Hospital with IPD & OPD Facilities only, without any operation theatre and labour room. As there is no specialist doctor posted at Rangiya, bed occupancy is very low, also it is close to the Central Hospital, Maligaon where speciality management are available, average foot-fall to the hospital is on the lower side. So, total amount of hospital waste generated is less and generated dry waste handled by the department staff and disposed as per extant rule. Pollution Control Board, Assam had been approached for authorization to handle Bio-Medical waste at Rangiya and the Board</p>	<p>SR- The reply of MoR is not acceptable. The audit observation is about BMW littered and scattered around the storage area at RH/PER both new and old Hospitals.</p> <p>WR- In case of DRH/Rajkot and Workshop Hospital Dahod necessary steps needs to be taken for disposal of</p>
--	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

		<p>supplied with an extensive list of prerequisite administrative and infrastructural issues which are being addressed by the Railway administration, these are lengthy procedure and would require six to twelve months time.</p> <p>SER:-SDRH/TATA:- Coloured coded and container bags available with label.</p> <p>SECR:- At Divl. Railway Hospital/Raipur, Bio Medical Waste is stored is protected in ventilated room which is secured from scattering or spillage by animals.</p> <p>SR:- DRH/Perambur:- This hospital has been provided with a secured shed for collection of bio-medical waste for over last 10 years and this point may have been erroneously addressed to our hospital.</p> <p>SDRH/Podanur:- A Separate area/secured room for storage of BMW is available at SDH/PTJ.</p> <p>WR:- DRM/Ratlam:- A central waste yard had been constructed for storage of</p>	BMW as per guidelines
--	--	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-----------------------

		<p>waste.</p> <p>DRH/RJT:- BMW is kept in a closed Room. BMW is being disposed of on Second day.</p> <p>SDRH/Valsad:- Bio Medical Waste segregated as per guidelines & handed over to authorized agency on daily basis.</p> <p>Jagjivan Ram Hospital, Mumbai Central (JRH):- Untreated BMW was stored beyond 48 hrs only ONCE During 2018-19 due to strike of BMW Transport vehicles. Agency to collect and Transport BMW is approved and nominated by local Municipality and state pollution Control Board. The Agency is Single agency and there is no alternative Agency approved from MPCB hence can not enter with alternative arrangements.</p> <p>Workshop Hospital Dahod:- BMW is disposed of thrice a week on Tuesday, Thursday and Saturday.</p>	
--	--	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--

<p>5.7</p> <p>Compliance of norms prescribed under the BMW Rules for transportation of bio-medical waste</p>	<p>BMW Rules (Rule 8) prescribe various norms for proper disposal of bio-medical waste. As per Schedule-IV of the BMW Rules, vehicle transporting bio-medical waste should be labelled with the bio-hazardous symbol⁶⁵. The containers or bags containing segregated bio-medical waste should be bar coded before sending out of the hospital premises for disposal. Similarly, the vehicles transporting such waste should be connected with global positioning system (GPS). Rules also provide for ensuring timely collection and transportation of the waste to the disposal site. BMW Rules also provided that hospital authorities should be allowed to inspect the treatment and disposal carried out by of the operator of common bio-medical waste treatment facility.</p> <p>The efficacy of compliance with the above stated rules in the selected 72 railway hospitals was examined by audit and following position emerged: -</p> <ol style="list-style-type: none"> Vehicles used for transportation of bio-medical waste were not labelled as prescribed under Rules in six hospitals in four zones. 	<p>Details are attached at Annexure 5.7</p> <p><u>Non-compliance of norms prescribed under the BMW Rules for disposal of BMW:-</u></p> <p>CR:-ZRH/Byculla:- Bar coding of containers is under process and GPS is available in agency's vehicle. Disposal of BMW is carried out at agency's end. The due inspections of agency's facility are being done by MCGM and MPCB authorities who renew the firm's authorization.</p> <p>DRH/Kalyan:- Bar coding of containers exists. GPS of vehicle fall under purveyance of KDMC (controlling authority of outsourced nominated collector).</p> <p>DRH/NGP:- bio Medical waste collection and disposal is outsourced and the prescribed norms for the same are followed and is also being ensured.</p> <p>SDRH/IGP:- Bar coding of containers exists, GPS of vehical fall under NMC (controlling authority of outsourced nominated</p>	
----------------------------------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--

	<p>ii. Bar coding of containers or bags containing bio-medical waste was not done in 41 hospitals in 14 zones. Further, the vehicles transporting bio-medical waste in 35 hospitals in 13 zones were not connected with global positioning system (GPS).</p> <p>iii. In seven hospitals in four zones, the hospital authorities did not ensure timely collection and transportation of bio-medical waste.</p> <p>iv. Hospital authorities were not allowed to inspect the treatment and disposal by the operators of the common bio-medical waste treatment facility in the case of 15 hospitals in six zones.</p> <p style="text-align: right;">(Annexure-5.7)</p> <p>Non-adherence to the norms for proper collection, transportation and disposal of bio-medical waste is indicative of lack of effective monitoring by hospital authorities. Further, as a result of deficient system of transportation of bio-medical waste such as vehicle not connected with</p>	<p>collector). BMW is timely collected. Occupier allowed inspecting the treatment facility by operator.</p> <p>SDRH/KWV:- Bar coding is available. GPS is available. Occupier allowed inspecting the treatment facility by operator.</p> <p>ER:- B.R. Singh hospital/Sealdah & SDRH/Andal:- Noted and shall be advised to the units for compliance.</p> <p>DRH/Harwah:- GPS is provided on the vehicle used by the agency. The process for introducing bar Coding system at the level of the hospital is under process.</p> <p>Workshop Hospital Liluah:- (i). Same is complied. (ii) During next tender same will be incorporated. (iii) Complied. (iv) No such incidence happened in this Hospital.</p> <p>ECR:- CSSH/Patna:- Waste disposed as per BMW norms.</p> <p>DRH/Danapur:- DRH/DNR has engaged IGIMS,</p>	
--	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--

	<p>GPS and absence of bar coding of waste, the risk of disposal of bio-medical waste with other municipal solid waste cannot be ruled out.</p> <p>MoR in reply (May 2022) admitting deficiency pointed out by audit stated that Railway Hospitals will ensure the norms for labelling, bar-coding, Global positioning system (GPS) provision and timely collection of bio-medical waste.</p> <p>65 Guidelines issued by CPCB in December 2016</p>	<p>Patna (Govt. approved Agency) for disposal and handling of Bio-medical waste.</p> <p>DRH/Sonpur:- Waste disposed as per BMW norms.</p> <p>SDRH/Gaya:- Bar coding is being done manually, After finalisation of Tender labelling of Vehicles, provision of GPS will be followed.</p> <p>NR:- DRH/Moradabad:- Vehicle used for transportation of BMW has been marked and labelled as per prescribed rule. Bar coding is being done and the vehicles have been provided with GPS. Hospital authorities are ensuring timely collection and transportation of BMW.</p> <p>SDRH/Anand Vihar:- the proposal for bar coding of containers and bag containing BMW is under process at HU/ANVT. The point regarding GPS on vehicle will be included in fresh agreement with CBWTF. The point to allow inspection of treatment and</p>	<p>NCR- Regarding DH/AGC, compliance and transportation of biomedical waste is being done by outsourced agency.</p>
--	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------------------------------------------

		<p>disposal by CBWTF will be included in the fresh agreement.</p> <p>SDRH/Amritsar:- There was no objection anytime for the inspection of treatment facility.</p> <p>NCR:- Now, Vehicles used for transportation of BMW is labelled. BAR coding of container is being ensured. A medical officer in all above hospitals (CH, DH/AGC & SDH.CNB) has been nominated for monitoring of proper collection, transportation and disposal of BMW</p> <p>NER:- Bar coding of containers at Mechanical workshop hospital,/Gorakhpur is basically a small Health Unit where OPD facilities are available. Hence Generation of BMW is very less The collected garbage is sent to CH/LNMRH/GKP for disposal collectively as per BMW act. Occupier are allowed to inspect the of BMW by operator.</p> <p>NFR:- CH/Maligaon:-</p>	
--	--	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--

		<p>The Bio-Medical Waste Disposal System in Central Hospital, Maligaon has been being outsourced since long to the agency which is the only one available at greater Guwahati as authorized by State Pollution Control Board. The agency is the fully responsible for GPS connection in transporting vehicles as the agency is already authorized under SPCB.</p> <p>Bar coding of containers was not done: Bar-coding of containers as well as bags is not available in this hospital at present. It will be implemented in the month of September, 2022.</p> <p>DRH/Dibrugarh Town:- Divisional Railway Hospital, DBRT has tied up with Assam Medical College and Hospital for “Common Bio-Medical Waste Treatment Facility” from June 2010. Ref No. MCH/20210/8938 date-09.07.2010.</p> <p>Bar coding of containers was not done: BMW</p>	<p>DRH/Rangiya: CMS/RNY stated that vehicle used for transportation of BMW will be Labelled and GPS tracked. Timely collection would be ensured. Specifications were mentioned in the tie up with CBWTF as per extant Rules, which would be executed by the CBWTF. Final compliance may be communicated to audit.</p>
--	--	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

		<p>disposal is managed by AMCH, Dibrugarh as per SPCB guidelines Bar Coding cannot be done by Railway authorities.</p> <p>Global positioning system was not provided on the vehicles:</p> <p>BMW from Divisional Railway Hospital,DBRT is collected by AMCH/Dibrugarh. The issue does not pertain to the Medical Department of TSK Division.</p> <p>DRH/Katihar:- Divisional Railway Hospital/KIR has already taken requisite authorizations from the SPCBs. There was no delay or discontinuation in this matter.</p> <p>All requisite provision in BMW rules for treatment of the Bio-Medical waste are being complied, effluent plant for liquid chemical waste is under process of procurement.</p> <p>The infection control committee is already formed at DRH/KIR who is monitoring work of BMW.</p> <p>SDRH/Rangiya:- N.F</p>	<p>SDRH/New Jalpaiguri: Bar Coding of containers was not done. GPS connection of vehicles transporting Bio-Medical Waste was not done.</p>
--	--	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------------------------------------------------------

		<p>Railway Hospital at Rangiya is a 25 bedded Hospital with IPD & OPD Facilities only, without any operation theatre and labour room. As there is no specialist doctor posted at Rangiya, bed occupancy is very low, also it is close to the Central Hospital, Maligaon where speciality management are available, average foot-fall to the hospital is on the lower side. So, total amount of hospital waste generated is less and generated dry waste handled by the department staff and disposed as per extant rule. Pollution Control Board, Assam had been approached for authorization to handle Bio-Medical waste at Rangiya and the Board supplied with an extensive list of prerequisite administrative and infrastructural issues which are being addressed by the Railway administration, these are lengthy procedure and would require six to twelve months time.</p>	
--	--	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--

		<p>SDRH/New Jalpaiguri:- Bar coding of containers was not done: We have tied up with Greenzen Bio Pvt. Ltd., a letter has been issued to provide bar code sticker for BMW containers.</p> <p>Global positioning system was not done provided on the vehicles: Vehicle is not owned by Railway.</p> <p>NWR:- CH/Jaipur:- The Bar coding system will be processed soon.</p> <p>DRH/Bikaner:- As per requirement under BMW rules, Installation of bar coding and GPS for handling of bio-medical waste will be ensured after communication with concerned agency on priority basis. Undertaking to submit inspection report of either municipal corporation/ local bodies/SPCB regarding proper disposal of biomedical waste by outsourced agency will be taken.</p> <p>SDRH/Abu</p>	<p>SECR- Factually correct.</p> <p>Even after a lapse of one year from receipt of quotation, bar coding has not been started in Central Hospital</p>
--	--	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------------------------------------------------------

		<p>Road:- Bar coding system will be ensured shortly after communication with operator on priority basis. Global positioning system had already complied by the operator i.e. En-vision Enviro Engineers pvt Ltd. CBWTF M/S En-vision Enviro Engineers pvt Ltd,was approached regarding this issue the CBWTF has agreed to allow hospital authorities to inspect the treatment plant and a representation will be send to CBWTF for inspection soon.</p> <p>SDRH/Bandikui:- Observation of this will be complied in future for implementation of bar coding.. Monitoring will be done by installation Global positioning system on vehicle.</p> <p>SCR:- Central Hospital/ Lallaguda:- Bar coding are generated from the TSPCB web site and sticking on the colour coded biomedical disposable covers. Process kept under practice. As on date Global Positioning system is available on the</p>	<p>Bilaspur, DRH/Raipur and SDRH/BMY.</p> <p>SR- Reply of MoR is not accepted. The fact remains that still in RH/PER and at SDRH/VM, no bar coded BMW bags are used.</p>
--	--	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

		<p>vehicles.</p> <p>DRH/Vijayawada:- Collection and transporting and disposal of bio medical waste is disposed by M/s Safenviron/Vijayawada which is approved by APPCB/BZA. Process kept under practice. As on date Global Positioning system is available on the vehicles.</p> <p>SER:- SDRH/TATA- Coloured coded and container bags available with label.</p> <p>CH/GRC – under process for implementation</p> <p>DRH/KGP – under process for implementation</p> <p>SDRH/TATA- will be starting very soon.</p> <p>CH/GRC – GPS is already available on the covered vehicles</p> <p>DRH/KGP – Vehicles used by the agency for transportation are connected with GPS</p> <p>SDRH/TATA- Vehicles used by the agency for transportation are connected with GPS</p> <p>SECR:- The quotation for Bar Coding has been</p>	<p>WR- Western Railway may take concerted action for timely implementation of Bar coding of collected BMW for their proper transportation and disposal as per norms.</p> <p>Disposal of BMW thrice a week (as in case of Workshop Hospital Dahod) is not acceptable being against the norms. Necessary action may be taken scrupulously for timely disposal at all</p>
--	--	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

		<p>submitted by M/s Butterfly Software on dated 02.02.2022 for Central Hospital/Bilaspur. Proposal has been under process. Correspondence has been made with Finance Department vide e-Office File No. 38754.</p> <p>For Divl. Railway Hospital/Raipur & Sub. Divl. Railway Hospital/Bhilai Marshalling Yard is under process vide e-Office No. 77261.</p> <p>SR:- Railway Hospital/Perambur:- The previous contract was signed prior to the invocation of rule for use of bar coded BMW bags. So the addition of this bags could not be incorporated in the middle of the agreement period. The previous contract has expired on 31 Jan 2022 and supply of bar coded BMW bags is included along with the fresh tender contract agreement with TNWML, Chennai for collection and disposal of BMW. The Finance has accorded</p>	<p>concerned locations.</p> <p><i>Though MoR have taken steps or assured for compliance of norms for disposal of BMW, the fact remains that provision of Bar coding & GPS</i></p>
--	--	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

		<p>concurrence for the same on 04 Jan 2022. However, due to objections from Finance, the tender is yet to be finalized.</p> <p>DRH/Arakkonam:- Pre-printed Barcoded BMW containers provided by the vendor which are already in use.</p> <p>SDRH/Villupuram:- Contract for Biomedical waste disposal at SDH/VM with Tamilnadu waste management limited, Chennai-29 expired. On renewal of Biomedical waste disposal, Bar-coding procedures in disposal of Bio-medical waste will be implemented.</p> <p>WCR:- :- Bar coding of is not used by Municipal Corporation Kota for disposing of BMW in SDRH/Kota. Barcoding is being used in SDRH/Gangapur City. Barcoding purchase is under process in SDRH/New Katni Jn. All establishment of have been advised to ensure effective compliance of BMW Rules.</p>	<p><i>is still not available in many hospitals, which needs to be expedited. Replies in respect of observations raised by ZR may be furnished.</i></p>
--	--	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------------------------------------------------------------------

		<p>WR:- Jagjivan Ram Hospital, Mumbai Central (JRH):- Vendor authorization process for supply of Bar codes is underway by BMC. Bar codes will be procured once it is completed and details of Vendor known. However till such time, details of points from where garbage is collected in JRH is being entered in APP provided by BMC as per there advice.</p> <p>DRH/Ratlam:- Barcoding will be started soon.</p> <p>DRH/Rajkot:- Barcoding is being processed by CPCB. Timely collection of BMW is ensured.</p> <p>SDRH/Valsad:- Bar coding of containers will be started as early as possible, the work is under process. Timely collection & transportation of BMW is done.</p> <p>Workshop Hospitals Dahod:- Timely collection is ensured. BMW is disposed off thrice a week on Tuesday, Thursday and Saturday.</p> <p>Metro Railway/Kolkata:- The</p>	
--	--	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--

		GPS connected with vehicles transporting BMW do not pertain to Tapan Sinha Memorial Hospital Metro Railway, Kolkata as it is fully monitored by West Bengal Pollution control Board.	
5.8 Disposal of bio-medical waste at hospital level	<p>Rule 4, 5 and 7 of the BMW Rules prescribe that every occupier (Railway Hospital) shall collect segregated bio-medical waste in coloured bags/containers and send it to the common bio-medical waste treatment facility for treatment and final disposal. Rules also prescribe that 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 75 kilometres. If such service is not available, the occupier shall set up in-house treatment facility like incinerator, autoclave or microwave and shredders as per authorization obtained (from SPCB) for treatment and disposal.</p> <p>The process of disposal of bio-medical waste in railway hospitals was assessed by audit and it was found that: -</p>	Details are attached at Annexure 5.7	<i>Ministry of Railways have not furnished any remarks about disposal of bio-medical waste at hospital level. Annexure- 5.7 is related to non-compliance of norms prescribed for transportation of bio-medical waste..</i>

	<p>i. In the case of nine hospitals in six zones, though the facility of common treatment operator was available within 75 kilometres, the management of bio-medical waste was done by these hospitals departmentally, even though in-house treatment equipment (like incinerators, autoclaves or microwave and shredders) were not in existence in these hospitals.</p> <p>ii. No such operator was available within 75 kilometres in 15 hospitals in nine zones. These hospitals managed the required treatment/disposal departmentally though the required in-house equipment (incinerator) for treatment and disposal of bio-medical waste was not available with them.</p> <p>In the absence of common bio-medical waste treatment facility (CBWTF) disposal of such bio-medical waste, some of the hospitals resorted to managing bio-medical waste departmentally endangering the safety of public health and likely impact on environment. This</p>		
--	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--	--

	<p>also reflected ineffective monitoring of such a vital aspect by hospital authorities.</p> <p>MoR in reply (May 2022) admitting deficiency pointed out by audit stated that Railway Hospitals are now ensuring disposal of bio-medical waste at CBWTF through outsourced agency. Reply is, however, silent on the aspect of Railway hospitals resorting to treatment of bio-medical waste departmentally without ensuring the required facility in this regard.</p>		
<p>5.9</p> <p>Non-submission of Annual Reports as required under the BMW Rules</p>	<p>Rule 13 of the BMW Rules prescribes that every occupier of healthcare facility (railwayhospital) shall submit an annual report, in Form-IV prescribed under the Rules, on or before 30th June of every year to the prescribed authority (SPCB). This report contained various information which <i>inter-alia</i> includes status of statutory authorisation/consent, GPS co-ordinates of hospitals, quantity of waste generated category wise, details of on-site storage and treatment facilities, liquid waste generation and treatment methods, etc. These reports were subsequently compiled, reviewed and analysed by SPCB, thereafter by CPCB and finally reviewed by the Ministry of Environment,</p>	<p>Details are attached at Annexure 5.8</p> <p><u>Annexure-5.8 (Refer Para No. 5.9)</u></p> <p><u>Annual Reports under BMW Rules not submitted by selected Hospitals:-</u></p> <p>CR:- DRH/ Byculla & DRH/KYN:- All annual report submitted to KDMC/MPCB authority.</p> <p>DRH/NGP:- Annual reports under BMW rules are available for ready reference. These are not submitted online in view of absence of authorisation letter from SPCB.</p> <p>SDRH/IGP:- All annual report submitted to</p>	

	<p>Forest and Climate Change.</p> <p>Status of the submission of the statutory annual reports was reviewed in audit in respect of 72 railway hospitals during the period 2015-16 to 2019-20 and following was observed: -</p> <ol style="list-style-type: none"> Only 11 hospitals in eight zones had submitted the report for all the five years. Nine other hospitals in seven zones submitted reports for intermittent periods. The balance 52 hospitals in 16 zones did not submit annual report in any of the five years (Details are indicated in <i>Annexure-5.8</i>). <p>Thus, the objective of monitoring mechanism established for management of bio- medical waste was not fulfilled due to lack of compliance to BMW Rules by railway hospital authorities.</p> <p>MoR in reply (May 2022) admitting deficiency pointed out by audit stated that Railway Hospitals will ensure submission of Annual Report under the bio-medical waste Rules.</p>	<p>NMC/MPCB authority.</p> <p>SDRH/KWV:- Not submitted. Reason:- During 2015-16 charge of the hospital was with CMP. When IRMS Doctor took over in 2017, doctor was unaware of the fact the annual BMW report needs to be submitted as it was not submitted in preceding year. Report for year 2021-2022 will be sent within a month.</p> <p>ER:- B.R. Singh Hospital/Sealdah, DRH/Harwah and SDRH/Andal:- Annual report under the BMW Rules submitted.</p> <p>Workshop Hospital Liluah:- At present same is complied as per extent rule.</p> <p>ECR:- CSSH/Patna:- BMW outsourced with IGIMS, Patna. Annual report in this regard never asked from this hospital.</p> <p>DRH/Danapur:- As soon as we get outsourcing, we will submit our report regularly.</p>	<p>ER- Neither monthly record of BMW nor the Annual Reports of the Railway Hospitals were made available in Eastern Railway Website in violation of provision in Bio-medical Waste Management Rules 2016.</p> <p>Copy of Annual Report in Form IV submitted by SDRH/Andal may please be made available to Audit.</p>
--	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

		<p>DRH/Sonpur:- BMW contract with M/s-Medicare Environmental Management/MFP. Annual report in this regard never asked from this hospital.</p> <p>SDRH/Gaya:- As soon as BMW work starts through outsourcing, annual report under BMW rules will be duly submitted.</p> <p>ECoR:-DRH/Waltair:- Annual Report on behalf of the hospital has been filed by M/S Maridi Eco Industries Pvt. Ltd. Which is the outsourced agency dealing with disposal of BMW from the hospital during the period 2015-16 to 2019-20. Further, from this year, the hospital will separately file the annual report to SPCB. For CH/BBS reports are being submitted annually and in time.</p> <p>NR:- DRH/Moradabad:- Annual report during the period 2015-16 to 2019-20 was not sent. The report of 2021-22 has been sent.</p> <p>DRH/Ambala Cant:- Annual report have been sent to HSPCB in</p>	<p>NCR- No documentary evidence provided by the Railway Administration for submission of annual report with in time to SPCB</p> <p>NER-It is mentioned that the Report will be submitted. Action is yet to be taken in this regard by the Railway</p>
--	--	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

		<p>prescribed Performa regularly without failure.</p> <p>SDRH/Anand Vihar:- Annual report as per BMW rule has been submitted by HU Incharge, ANVT to DPCC.</p> <p>SDRH/Amritsar:- Annual report submitted till 2015-16. It will be ensured to submit annual report in future.</p> <p>Jagadhari Workshop Hospital:- It will be ensured to submit annual report in future.</p> <p>NCR:- All incharges has been instructed vide this office letter dated 02.09.2022 to submit the Annual Report well in time to respective SPCB</p> <p>NER:-</p> <p>LNMHRH/Gorakhpur:- A nnuual report of 2015-16 to 2019-20 will be submitted.</p> <p>DRH/Varanasi:- Annual report of 2015-16 to 2019-20 will be submitted.</p> <p>SDRH/Gonda:- Annual report of 2015-16 to 2019-20 will be submitted.</p> <p>Mechanical Workshop Hospital/Gorakhpur:- A nnuual report of 2015-16 to</p>	<p>Administration.</p> <p>NFR- CH/Maligaon: Annual Report, as required under BMW Rules-13 in Form No: IV submitted on 23.05.2022 by CH/MLG.</p> <p>(b) DRH/Dibrugarh Town: Form No: IV not submitted.</p>
--	--	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

		<p>2019-20 will be submitted.</p> <p>NFR:- CH/Maligaon:- Non Compliance of norms prescribed under BMW Rules for disposal of BMW: Bar coding of containers was not done:- We have tied up with Greenzen Bio Pvt. Ltd., a letter has been issued to provide bar code sticker for BMW containers.</p> <p>Global positioning system was not done provided on the vehicles: Vehicle is not owned by Railway.</p> <p>DRH/Dibrugarh Town:- Annual report under the BMW Rules not submitted by selected Hospitals: Period for which Annual report not submitted from 2015-16 to 2019-2020). Will be compiled.</p> <p>DRH/Katihar:- Divisional Railway Hospital/KIR has already taken requisite authorizations from the SPCBs. There was no delay or discontinuation in this matter.</p> <p>All requisite provision in BMW rules for treatment of</p>	<p>DRH/Katihar: Form No: IV not submitted.</p> <p>SDRH/NJP: Form No: IV not submitted.</p> <p>DRH/Rangiya: Form No: IV not submitted.</p>
--	--	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------

		<p>the Bio-Medical waste are being complied, effluent plant for liquid chemical waste is under process of procurement.</p> <p>The infection control committee is already formed at DRH/KIR who is monitoring work of BMW.</p> <p>SDRH/New Jalpaigudi:- Annual report under the BMW rules not submitted by selected Hospitals. Period for which Annual report not submitted: 2015-16 to 2019-20. It has already been complied.</p> <p>SDRH/Rangiya:- N.F Railway Hospital at Rangiya is a 25 bedded Hospital with IPD & OPD Facilities only, without any operation theatre and labour room. As there is no specialist doctor posted at Rangiya, bed occupancy is very low, also it is close to the Central Hospital, Maligaon where specialty management are available, average foot-fall to the hospital is on the lower</p>	
--	--	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--

		<p>side. So, total amount of hospital waste generated is less and generated dry waste handled by the department staff and disposed as per extant rule. Pollution Control Board, Assam had been approached for authorization to handle Bio-Medical waste at Rangiya and the Board supplied with an extensive list of prerequisite administrative and infrastructural issues which are being addressed by the Railway administration, these are lengthy procedure and would require six to twelve months time.</p> <p>NWR:- CH/Jaipur:- Periodical return were submitted to RSPCB on 12/01/2016 (from Jan 2015 to Dec 2015) 13.01.2017(From Jan 2016 to Dec 2016)03.02.2018 (From Jan2017 to Dec 2017) 30.04.2021 (From Apr 2020 to Mar 2021) and 08.09.2021 (From Jan 2019 to Dec 2019 & from Jan 2020 to Dec 2020)</p> <p>DRH/Bikaner:- This has</p>	<p>SR- Reply of MoR is not accepted. Only in RH/PER the Annual Report in Form-IV was submitted to SPCB upto the year ending December 2020.</p> <p>In respect of the other hospitals, no Annual Return has been submitted.</p>
--	--	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

		<p>been followed.</p> <p>SDRH/Abu Road:- AS SDRH/Abu road obtained authorization from SPCB on 16/12/2019 , hence annual report for the stipulated period from 2015-16 to 2019-20 was not submitted after that regular annual report is being submitted Annual Report Jan.2020 to Dec.2020 and Jan,2021 to Dec.2021) have been submitted.</p> <p>SDRH/Bandikui:- Noted & will be ensured.</p> <p>SR:- Railway</p> <p>Hospital/Perambur:- 2015-16 to 2019-20 Annual report on Form-IV is duly submitted to SPCB between Jan-Jun every year for the preceding year. The same is also published in Southern Railway Website, It can be assessed by the following link.</p> <p>Sr.Indianrailways.gov.in</p> <p>About HR Organization Department – Medical – Headquarters. Look for Annual report on Bio-Medical waste.</p> <p>DRH/Golden rock:- 2015-16 to 2019-20 To submit</p>	
--	--	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--

		<p>the periodic returns to the State Pollution Control Board one should obtain authorization from the state pollution control board for Disposal of Biomedical Waste. Since the process for obtaining Authorisation for Biomedical Waste is under process as mentioned above in Annexure – 5.1. it is ensured that once the STP is replaced necessary authorization will be obtained from SPCB for further submission of periodical returns regularly to the concerned authority.</p> <p>DRH/Arakkonam:- Annual reports from 2015-16 to 2019-2020 will be submitted shortly.</p> <p>SDRH/Podanur:- As Salem Division has entered BMW contract on 01.08.2022, the submission of Annual report under the BMW rules will be ensured in future.</p> <p>SDRH/Villupuram:- Annual report will be submitted for 2015-16 to 2019-20.</p> <p>SCR:- (2015-16 to 2019-20) Central</p>	<p>SCR- Minutes of meeting were not made available to Audit for verification. Same may be furnished to ZR.</p>
--	--	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------

		<p>Hospital/Lallaguda:- License for authorization is in final stage and will be obtained soon. Annual report in prescribed form-IV will be submitted.</p> <p>DRH/Vijayawada:- License for authorization is in final stage and will be obtained soon. Annual report in prescribed form-IV will be submitted.</p> <p>DRH/Nanded:- From now annual report is being submitted to SPCB as per the norms prescribed in the rules 2016.</p> <p>SDRH/Purna:- From now annual report is being submitted to SPCB as per the norms prescribed in the rules 2016.</p> <p>SDRH/Rayanapadu:- From now annual report is being submitted to SPCB as per the norms prescribed in the rules 2016.</p> <p>SER:- CH/GRC – Submitted regularly DRH/KGP – Submitted regularly DRH/ADRA – To be submitted SDRH/TATA- Submitted</p>	
--	--	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--

		<p>SECR:- Annual Report in Form No. IV for the year 2019 & 2020 of Central Hospital/Bilaspur has been submitted to SPCB.</p> <p>Annual Report in Form –IV for the period from 2015 to 2020 of Divl. Railway Hospital/Raipur and Sub. Divl. Railway Hospital/BMY has not been initiated and submitted to SPCB. However for the year 2020 Annual Report in Form No. – IV for Divl. Railway Hospital/Raipur and Sub. Divl. Railway Hospital/Bhilai Marshalling Yard submitted to SPCB.</p> <p>SWR:- CH/Hubli:-Annual Report is being submitted regularly at the end of every year.</p> <p>DRH/Mysuru:- Annual report for 2014, 2016, 2017, 2018, 2019 were submitted during the relevant year. The annual report for the year 2015 was not submitted to KSPCB, Mysuru, since they have inspected the Railway Hospital on 13/7/2015 and</p>	<p>WR- Western Railway Administration has merely brought out that Reports have been submitted, Reports are being regularly submitted since last two years etc. without any clarity on whether reports for the period observed during the review has been submitted.</p> <p>Railway Administration may therefore clarify the following</p>
--	--	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

		<p>insisted for liquid Effluent treatment Plant to be provided for treatment and disposal of liquid effluent generated from OT, Lab and washing activities. Accordingly LETP was constructed and later in the year 2016-17 the annual report was submitted. However, consent was given by KSPCB on 3/2/2016 for the period from 1/7/2013 to 30/6/2016.</p> <p>Rail Wheel Factory/Yelahanka/Bengaluru (RWF):- Annual report pertaining to RH/RWF is submitted regularly every year. Annual report of 2015 has been submitted.</p> <p>WR:- Jagjivan Ram Hospital, Mumbai Central (JRH):- Annual report has already been submitted.</p> <p>DRH/Ratlam:- Annual returns are being submitted regularly since last two years.</p> <p>DRH/Rajkot:- Submitted annual report from 2018 to 2020 already available at</p>	<p>1) period for which Reports have been submitted in respect of JRH Mumbai Central, DRH, Valsad</p> <p>2 Timeframe by which Reports for the missing period observed during review in case of DRH, Ratlam and Rajkot will be submitted</p> <p>BLW-Not submitted for the year 2015-16 to 2020-21.. The annual report as required under BMW rules for the year 2021-22 in Form IV is being prepared and will be submitted within due date of 30th June 2023.</p> <p>CLW- Annual report (Form-IV) was submitted on 01.06.2022 for the period from Jan 2021 to December 2021 to WBPCB.</p> <p><i>Zone-wise replies to the observations may be furnished.</i></p>
--	--	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

		<p>GPCB official site.</p> <p>SDRH/Valsad:- Annual report has been submitted to GPCB.</p> <p>WCR:- Annual Report will be submitted in time after getting Registration Certificate.</p> <p>Metro Railway/Kolkata:- It is ensured that Annual Reports will be submitted in future within due date.</p> <p>Banaras Locomotive Works Hospital/Varanasi (BLW):-No annual reports have been submitted for the said period due to COVID-19 & other reasons It will be taken care in future and compliance will be ensured within due date.</p> <p>Kasturba Gandhi Hospital Chittaranjan (CLW):- Kasturba Gandhi Hospital, CLW, Chittaranjan has submitted Annual Reports (Form-IV) of Bio-medical waste to WBPCB with in prescribed time for all the five years.</p>	
--	--	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--

<p>5.10 Health check-up, immunization and training of healthcare workers handling bio-medical waste</p>	<p>As per Rule 4 of the BMW Rules, it is the duty of every occupier of health care facility (railway hospital) to conduct health check up of staff involved in handling of bio-medical waste at the time of induction and at least once in a year and maintain record for the same. This rule also prescribed immunisation of health workers against diseases that are likely to be transmitted by handling of the bio-medical waste. Rule also provided for proper training to such healthcare workers at time of induction and thereafter at least once every year and details of such training should be provided in the Annual report.</p> <p>Compliance to the said rule by hospital selected for audit revealed the following:</p> <p>-</p> <ol style="list-style-type: none"> i. Prescribed health check-up of staff involved in handling of bio-medical waste was not conducted during the review period (2015-16 to 2019-20) in 13 railway hospitals in nine zones. Records for conducting such health check-up were not maintained, in seven hospitals in five zones. 	<p>Noted please.</p>	<p><i>As MoR has noted the audit point, for compliance, hence no further comments to offer.</i></p>
---------------------------------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-----------------------------	-----------------------------------------------------------------------------------------------------

	<p>ii. Healthcare workers were not immunized during the review period in 14 hospitals in eight zones. Further, in 23 hospitals in 11 zones where immunization was done, no records for the same were maintained.</p> <p>iii. Training programmes for healthcare workers were not conducted in 15 hospitals in nine zones. In 12 hospitals in six zones though the training programmes were conducted, no record for the same was maintained.</p> <p>iv. Clause for engaging only skilled staff handling of bio-medical waste (in case of outsourcing) was not incorporated in the contracts in 46 hospitals in 14 zones. Health check-up of such outsourced staff was not done during the period of 2015-16 to 2019-20 in 14 hospitals in seven zones and immunization of such outsourced staff, as prescribed, was not done in 15 hospitals in eight zones.</p> <p>It is evident from this position that</p>		
--	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--	--

	<p>hospital authorities were not serious in monitoring and ensuring occupational health safety of their workers engaged in handling of bio- medical waste.</p> <p>MoR in reply (May 2022) stated that many of the Railway hospitals mentioned in audit comment have started ensuring health check-up, immunization & training of health care workers handling bio-medical waste.</p>		
<p>5.11 Existence of monitoring mechanism for managing bio-medical waste</p>	<p>Rule 4 of the BMW Rules provides that every occupier of healthcare facility (railway hospital) should 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. Such committee shall meet once in every six months and the record of the minutes of the meetings shall be submitted along with the annual report to the SPCB.</p> <p>The effectiveness of the prescribed review and monitoring mechanism was assessed by audit in respect of selected railway hospitals and following was observed: -</p> <ol style="list-style-type: none"> Review and monitoring committee was not established in 52 hospitals. Six monthly meetings were held 	<p>Details are attached at Annexure 5.9.</p> <p>CR:- ZRH/Byculla:- BMW management committee formed and minimum two meetings held each year.</p> <p>DRH/KYN :- BMW management committee not formed.</p> <p>DRH/NGP:- BMW management committee not formed. A internal audit committee will be formed to monitor and review the management of BMW.</p> <p>DRH/KWV:- BMW management committee formed. One meeting was conducted.</p> <p>ER:- SDRH/Andal:- Now it is being ensured and followed as per BMW guidelines.</p> <p>Workshop Hospital</p>	<p>ER- Workshop Hospital Liluah is still not having any Committee as warranted under BMW Rules for monitoring Biomedical Waste</p>

	<p>only in 11 out of 20 hospitals where such committee was established. (Details indicated in <i>Annexure 5.9</i>)</p> <p>Thus, it is evident that the statutory provisions, for proper monitoring of the process of handling bio-medical waste was not effectively complied with. Resultant adverse implication on the quality of segregation, collection, treatment, storage and disposal of bio-medical waste can not be ruled out.</p> <p>MoR in reply (May 2022) admitting deficiency pointed out by audit stated that Railway Hospitals have initiated to establish a system to review and monitor the bio-medical waste management.</p>	<p>Liluah:- Not under our purview.</p> <p>ECR:- CSSH/Patna:- Time to time inspection is conducted by DMO in-charge.</p> <p>DRH/Danapur:- A committee having a doctor, nursing staff, lab technician and a person of outsourcing agency is formed.</p> <p>DRH/Sonpur:- Time to time inspection is conducted by authorized Medical Officer.</p> <p>SDRH/Gaya:- Already BMW management committee formed. Duly followed.</p>	<p>Management.</p> <p>The date of formation of Committee in SDRH/Andal and copy of minutes of periodical meetings of such Committee may please be furnished.</p> <p>Even after formation of the Committee in BRSH Sealdah and DRH Howrah, it was observed during review that neither the monitoring was effective nor there was any recommendation in improving the system of handling of BMW. Despite frequent failure of the outsourced agencies in daily lifting of BMW from Divisional Railway Hospital Howrah, their performances were reckoned as good in most of the meetings.</p>
--	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

		<p>ECoR:- DRH/Waltair:- BMW management committee has been formed on 18.10.2021 considering of four members (three medical officers and ANO) which has started monitoring of BMW disposal on a six month basis.</p> <p>CH/Bhubaneswar:- A committee is established, which has started monitoring of BMW on a six month basis to oversee the issues related to storage segregation and disposal of BMW.</p> <p>NR:-DRH/Moradabad:- Review and Monitoring Committee has been nominated in year 2020 for Divisional Hospital and meeting are being held since then. Report is being sent to SPCB.</p> <p>DRH/Ambala Cant:- Noted for future compliance to establish a Review and Monitoring Committee and meetings will be held.</p> <p>SDRH/Anand Vihar:- Review and</p>	
--	--	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--

		<p>Monitoring Committee for BMW management is being formed at HU/ANVT. Six monthly meeting of BMW management committee at HU/ANVT level has been started.</p> <p>SDRH/Amritsar:- Noted for future compliance to establish a Review and Monitoring Committee and meeting will be held.</p> <p>Jagadhari Workshop Hospital:- Review and Monitoring Committee and meeting will be processed soon.</p> <p>NCR:- BMW is being collected and disposed through authorized agency under the monitoring of Medical Officer. A review & monitoring committee has been nominated in the hospitals.</p> <p>NER:- review and monitoring is carried out and it would be ensured every 06 month when meeting are held.</p> <p>NFR:- CH/Maligaon:- Non-existence of monitoring mechanism required under the BMW Rules:</p>	<p>NFR- CH/Maligaon: Details of Meetings may be provided.</p>
--	--	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------

		<p>hospital, where waste is generated. Dustbin and containers are emptied regularly. Arrangements are in place to store the waste collected from waste generating points.</p> <p>DRH/Katihar:- Divisional Railway Hospital/KIR has already taken requisite authorizations from the SPCBs. There was no delay or discontinuation in this matter.</p> <p>All requisite provision in BMW rules for treatment of the Bio-Medical waste are being complied, effluent plant for liquid chemical waste is under process of procurement.</p> <p>The infection control committee is already formed at DRH/KIR who is monitoring work of BMW.</p> <p>SDRH/New Jalpaiguri:-</p> <p>Non existence of monitoring mechanism required under the BMW Rules.</p> <p>Whether BMW management committee formed: Yes</p> <p>If formed whether minimum 2 are held each</p>	<p>DRH/RNY: Committee was formed to review and monitor activities related to BMW Management on 30.10.2022. Committee met on 30.10.2022. Annual Report was to be sent to SPCB on/before 30th June every year. Minutes of Meetings were not submitted this year.</p>
--	--	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

		<p>year: Yes</p> <p>SDRH/Rangiya:- N.F Railway Hospital at Rangiya is a 25 bedded Hospital with IPD & OPD Facilities only, without any operation theatre and labour room. As there is no specialist doctor posted at Rangiya, bed occupancy is very low, also it is close to the Central Hospital, Maligaon where speciality management are available, average foot-fall to the hospital is on the lower side. So, total amount of hospital waste generated is less and generated dry waste handled by the department staff and disposed as per extant rule. Pollution Control Board, Assam had been approached for authorization to handle Bio-Medical waste at Rangiya and the Board supplied with an extensive list of prerequisite administrative and infrastructural issues which are being addressed by the Railway administration,</p>	
--	--	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--

		<p>these are lengthy procedure and would require six to twelve months time.</p> <p>NWR:- CH/Jaipur:- Bio – medical waste Management Committee meeting are held regularly twice in a year.</p> <p>DRH/Bikaner:- Bio – medical waste Management Committee meeting are held regularly.</p> <p>SDRH/Abu Road:- Review and Monitoring committee for monitoring of the activities related to bio-medical waste management has already been made and regular review meetings are being held at SDRH/Abu road.</p> <p>SDRH/Bandikui:- Noted, it will be ensured.</p> <p>SR:- Railway Hospital/Perambur:- Yes. Regular inspections are being carried out and records of inspection is maintained. A BMW management committee comprising of Chairman, two Nodal Officers, A Microbiologist, Assistant Nursing Officer and Chief Health Inspector have been</p>	<p>WR-Western Railway Administration has stated that monitoring mechanism</p>
--	--	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------

		<p>formed to monitor the activities. Dr. King Gandhi and Dr. TE Ramesh have been nominated as the Nodal Officer.</p> <p>DRH/Golden rock, DRH/Arakkonam, SDRH/ Podanur & SDRH/Villupuram:- Meetings are regularly conducted.</p> <p>SCR:- CH/Lallaaguda, DRH/Vijayawada, DRH/Nanded, SDRH/Purna SDRH/Rayanapadu:- BMW management committee has been formed and minimum two meetings are held each year.</p> <p>SER:- SDRH/Tatanagar:- BMW management committee has been formed and minimum two meetings are held in each year.</p> <p>SECR:- Review & monitoring committee for Bio Medical Waste formed at Central. Hospital/Bilaspur, Divl. Railway Hospital/Raipur and Sub. Divl. Railway Hospital/Bhilai Marshalling Yard. One</p>	<p>will be ensured at DRH, Rajkot, DRH, Ratlam and Workshop Hospital Dahod. However, this needs to be implemented scrupulously without delay.</p> <p>.</p> <p>CLW- A committee regarding supervision of Bio-Medical Waste was formed on 13.04.2022 and minutes drawn. Last minutes was drawn on 13.01.2022.</p>
--	--	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

		<p>monthly meeting was held on 02.02.2022 at Central Hospital/Bilaspur, Divl. Hospital/Raipur on 23.07.2022 and at Sub. Divl. Hospital/Bhilai Marshalling Yard on 28.06.2022 and Minutes are available on record.</p> <p>SWR:- CH/Hubli:- BMW committee is formed and regular meetings are held (once in two months) and documents are maintained.</p> <p>DRH/Mysuru:- BMW management committee was formed during the year 2012-22.</p> <p>Rail Wheel Factory/ Yelahanka/Bengaluru (RWF):- BMW has been formed with factory Medical Officer as Nodal Officer and Nursing staff as members. Meeting twice in a year are conducted at hospital level and minutes recorded.</p> <p>WR:- Jagjivan Ram Hospital, Mumbai Central (JRH):- Monitoring has been done on regular basis. Committee has been</p>	<p><i>MoR have either established the monitoring mechanism now or have assured for the same; however, fact remains that such an important issue related to Bio-medical waste was not taken care of properly. Zone-wise replies may be furnished.</i></p>
--	--	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

		<p>formed & quarterly meetings are conducted.</p> <p>DRH/Ratlam:- Will be ensured henceforth.</p> <p>DRH/Rajkot:- No (Will be ensured henceforth).</p> <p>SDRH/Valsad:- Monitoring has been done on regular basis. Committee has been formed & quarterly meetings are conducted.</p> <p>Workshop Hospital /Dahod:- Will be ensured henceforth.</p> <p>Metro</p> <p>Railway/Kolkata:- A Monitoring Committee for BMW service exists in Tapan Sinha Memorial Hospital, Metro Railway, Kolkata and minimum two meetings held each year. Last meeting was held on 14.07.2022.</p> <p>Banaras Locomotive Works Hospital/Varanasi (BLW):- BMW management committee has been formed post audit period. Meeting will be held every six month.</p> <p>Kasturba Gandhi Hospital Chittaranjan (CLW):- A Bio-medical</p>	
--	--	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--

		<p>waste Management committee has been formed on 13.04.2022 consisting of Asst. Chief Medical Superintendent (FW), Asst. Nursing Officer & Chief Health Inspector and meetings/inspections were held on 25/5/2022, 27/5/2022 & 11/7/2022.</p>	
<p>5.12</p> <p>Conclusion</p>	<p>Railways have one of the largest medical care facilities across the country that generates large bio medical waste every day. Several deficiencies were noticed in the processes related to collection, segregation, transportation, storage and disposal of bio medical waste.</p> <p>Requisite authorizations from the SPCBs in compliance to the BMW Rules were not obtained and there were delays/discontinuance in obtaining mandatory renewal of authorization.</p> <p>Requisite infrastructure for handling bio medical waste did not exist and there was deficiency in the process of collection of bio medical waste in hospitals test checked in audit. Segregation and pre-treatment of the liquid chemical waste generated was not carried out in</p>	<p>Noted please.</p>	<p><i>No further comments.</i></p>

	<p>compliance to the BMW Rules. Bio medical waste was found to have been stored beyond the prescribed limit of 48 hours.</p> <p>Audit found significant shortcomings⁶⁶ in transportation of bio medical waste. Importantly to ensure requisite monitoring and over sight of the BMW Rules, committees, which were required to be formed, were not in existence in some of the facilities and prescribed annual reports were not submitted to SPCBs in any of the years during 2015 to 2020.</p> <p>Mandatory health checkup, immunizations and training to the health care workers including out sourcing staff engaged was inadequate.</p> <p>⁶⁶ <i>Mandatory labeling, bar coding and provisioning of GPS facilities in vehicles used for transportation</i></p>		
	<p>Summary of Audit Findings</p> <ul style="list-style-type: none"> • Railway Hospitals were functioning without requisite authorizations from the SPCBs and delays/ discontinuities in obtaining mandatory renewal of authorization was observed in some other hospitals, which was in 	Noted Please.	<i>No further comments</i>

	<p>violation of BMW Rules.</p> <ul style="list-style-type: none"> • Railway Hospitals failed to comply with requisite provisions in BMW Rules for treatment of the bio-medical/liquid chemical waste generated as also for storage and transportation of such waste. • Committees required to be informed to ensure requisite monitoring under BMW Rules did not exist. 		
	<p>Recommendation</p> <p>IR needs to ensure effective compliance with Bio-Medical Waste Management Rules for handling, collection, pre-treatment, segregation, storage and disposal of biomedical waste and strengthen monitoring mechanism.</p>	Noted please.	<i>No further comments</i>
Chapter 6 Management of E-Waste			
	<p>Audit objective 5</p> <p>Whether assessment, management and disposal of E-waste generated in railway establishment as per applicable</p>	The instructions regarding E- Waste management have been issued from time to time to All Zonal Railways and	Although E-Waste (Management) Rules, 2016 were issued in October 2016, Railway Board took more than 5 years to issue instructions to ZRs

	<p>rules</p> <p>Indian Railways is one of the major producer of E-waste on account of computerization of the related IT infrastructure at passenger reservation centers, EDP centers, unreserved ticketing systems, offices as also extensive IT infrastructure used for signaling and telecom services. These discarded items including computers/laptops, e-monitors, T.V. sets, electronic equipment; servers etc. are defined as electronic waste or E-Waste. It is therefore imperative that the E-Waste is properly identified, segregated, stored and disposed of in a manner, which is not hazardous to human health and is in harmony with the environment.</p> <p>Central Government had notified E-Waste (Management) Rules, 2016 that superseded the E-Waste (Management and Handling) Rules, 2011. These rules aim to enable the recovery and/or reuse of useful materials from E-Waste, thereby reducing the hazardous wastes that destined for disposal and to ensure environmentally sound management of all types of waste of electrical and electronic equipment.</p>	<p>Production Units. The instruction to Zonal Railway and PUs have been issued vide Railway Board's letter No. 2022/RS(S)/709/1 dated 18.01.2022, to follow the instructions as contained in the E-Waste (Management) Rules, 2016 and E-Waste (Management) Amendment Rules, 2018.</p>	<p>and PUs to follow the legislative Rules.</p>
--	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-------------------------------------------------

	Scrutiny of the records in selected 86 units (EDP/PRS/UTS/GSD) revealed deficiencies such as storage of E-Waste beyond permissible limits, non-submission of prescribed information to SPCB and these are covered in succeeding paragraphs.		
6.1 Absence of consolidated instructions and training for handling of E-Waste	The rules regarding E-Waste were issued in October 2016. E-Waste Rules has, however, distinct procedure for handling and storage of E-Waste. Audit observed that procedure of condemnation as prescribed for the other office items such as furniture etc. were followed in respect of E-Waste. Further, no specific training module was devised/ implemented for impressing upon awareness for effective storage and disposal of E-Waste in any of the Zones. Hence, the mechanism for storage and disposal of E-Waste was weak and inadequate.	<p>The disposal of E-Waste is done through e-auction only to the bidders having valid CPCB/SPCB certificates.</p> <p>Zonal Railways are regularly updated about latest instructions and guidelines issued time to time regarding handling of E-Waste.</p> <p>The staff of Zonal Railways and PUs handling E-Waste are being regularly updated about latest instructions and guidelines issued time to time by Railway Board for compliance.</p>	<i>The reply of MoR is not tenable as no specific training module for awareness on effective storage and disposal of e-waste was devised and implemented</i>
6.2 Submission of stipulated Form 3 to SPCB	SPCB had prescribed recording quantity of E-Waste generated per year in metric ton (MT) and the required information to be furnished to SPCB in Form 2. Based on Form 2 records, a consolidated data comprising of quantity of E-Waste generated, recycled and sold during the year to the dismantler was required to be sent to the SPCB in the prescribed form 3. The status of compliance with SPCB's	<p>It has been noticed that the system of submission of Stipulated Form 3 to SPCB is not followed by some of the Zonal Railways. However, most of the Railways are complying the instructions regarding submission of Stipulated Form 3 to SPCB.</p> <p>Further, Zonal Railways and PUs have been advised to strictly follow the instructions Form 3 to SPCB.</p>	<i>MoR has not furnished any remarks about recording e-waste generated in Form- 2 based on which the Form-3 is filled up as a consolidated statement. MoR needs to ensure the maintenance of requisite information required to be recorded in Form-2 & Form-3.</i>

directives and findings are indicated in Table 6.1.

Table 6.1: Status of compliance of SPCB's directives

Particulars	Status of compliance of SPCB's directives		
	E D P C en tr es	PR S/ UT S Ce ntr es	Scr ap De pot s (G SD)
Information in respect of generation of category wise E-Waste not recorded in the prescribed Form 2 specified in the E-Waste rules	46 (53)	16 (16)	16 (17)
Consolidated data on quantity of E-Waste generated, recycled and sold during the year to the dismantler and details sent to SPCB in the prescribed Form 3.	Since the details were not recorded in Form 2, the information for Form 3 hence could not be assessed.		

Figures in bracket represent total units checked.

	<p>The information in prescribed Form 2 & 3 was meant for monitoring the quantum of E-Waste generated and disposed. In absence of the requisite information that was required to be recorded in Form 2 and Form 3, neither the actual quantum of E-Waste generated was assessed nor was the same monitored. (<i>Annexure 6.1 and 6.2</i>)</p>		
<p>6.3</p> <p>Storage of the E-waste beyond permissible limit</p>	<p>The E-Waste rules prescribed a period of 180 days for its storage. Approval of SPCB was required for storage beyond 180 days (up to maximum of 365 days). Scrutiny of records⁶⁷ revealed huge quantities of E-Waste awaiting disposal for periods beyond 180days as indicated below:-</p> <p>1. In 12 Zones E-Waste was stored beyond permissible 180 days and records made available did not indicate if SPCB's approval was sought for storage beyond the prescribed period of 180 days.</p> <p>The quantity of E-Waste stored beyond 180 days without seeking permission ranged between 0.034 MT to 30.5 MT during the period from 2015 to 2020.</p> <p>⁶⁷ <i>condemnation reports, sale and</i></p>	<p>Before publishing in catalogue for sale through e- auction, the e-waste is stacked separately for easy identification.</p> <p>It has been noticed that the system of Storage of e-waste beyond permissible limit is not followed by some of the Zonal Railways. However, most of the Railways are complying the instructions regarding Storage of e-waste beyond permissible limit.</p> <p>Further, Zonal Railways and PUs have been advised to strictly follow the instructions and guidelines regarding Storage of e-waste beyond permissible limit.</p> <p>It has been confirmed by most of the Railways that the E-waste is disposed off in prescribed time limit and no e-waste is kept for more than 180 days.</p>	<p>ER- Reply of MoR regarding non-compliance of Rules regarding storage time of e-waste is not zone specific. Review, however, revealed that In Eastern Railway, in addition to excessive storage time at the generation points beyond permissible limit, the e-wastes were further stored for a substantial period in excess of prescribed 180 days before final disposal. No permission was obtained from Pollution Control Board for storing these e-wastes beyond 180 days</p> <p>NFR- GSD/DBRG did not receive any Guidelines for storage of E-Waste</p> <p>SR- MoR has accepted audit observation. Action is to be taken to ensure that e-waste is not stored beyond the permissible period.</p>

	<i>auction registers kept at the scrap depots and the divisional stores</i>		<p>WR- Reply is not correct as far as Western Railway is concerned where during review it was seen that: There was no system in place to record the generation of E-Waste from time to time.</p> <p>E-Waste register showing opening balance in 2015 was sent for disposal in 2018-19 at PRS Mumbai Central. No permission was obtained for delay beyond 180 days from the concerned SPCB.</p> <p><i>MoR have either taken steps or assured to initiate the same for proper storage of e-waste, however the fact remains that proper attention was not paid to such an important issue. Replies to observations raised by ZR may be furnished.</i></p>
6.4 Conclusion	<p>IR lacked mechanism for dealing with the E-Waste in compliance to the Rules. Training programmes for creating awareness for handling of E-Waste were not conducted. Important aspect pertaining to maintenance of records, submission of stipulated forms to the SPCBs as also seeking approval of SPCB for storing E-Waste beyond 180 days were not taken care of.</p>	<p>The instructions regarding E- Waste management have been issued from time to time to All Zonal Railways and Production Units. Recently the Railway Board's letter No. 2022/RS(S)/709/1 dated 18.01.2022, the instruction to E- Zonal Railway and PUs have been issued to follow the instructions as contained in the E-Waste (Management) Rules, 2016 and E-Waste (Management) Amendment Rules, 2018.</p> <p>Zonal Railways and PUS have been instructed to follow the above instructions</p>	<p>SR- Action is to be taken to ensure that e-waste is not stored beyond the permissible period. final compliance may be communicated.</p> <p><i>Off late, MoR have issued instructions for compliance of the E-Waste Rules in January 2022, however more sensitization and better monitoring is required for proliferation and adherence of these</i></p>

		meticulously. It has been confirmed by the Zonal Railways and PUS dealing with disposal of E- Waste that the E-Waste is disposed off in prescribed time limit and no E-Waste is kept for more than 180 days, being exceptions in some Railways.	<i>Rules at ground level.</i>
	Summary of Audit Findings Railway Board did not initiate measures to conduct training programmes to sensitise the officials for handling E-Waste in conformity with E-Waste Management Rules.		No further comments.
6.5 Recommendation	<i>IR needs to initiate measures for creating awareness on the issue of handling E-Waste besides devising monitoring mechanism for ensuring effective compliance with E-Waste Management Rules</i>	As per E-Waste (Management) Rules, 2016 and E-Waste (Management) Amendment Rules, 2018, SPCB is the nominated agency for organizing training programmes for handling of E-Waste. Whenever any such programme is organized, the staff of Railways and PUS handling E-Waste are required to attend such training programmes.	<i>MoR should take steps on their own for creating awareness on handling of e-waste and should not merely depend on the initiatives of SPCBs.</i>

Sr. Audit Officer/Review