AGENDA ITEMS FOR 95th MEETING OF THE TECHNICAL REVIEW COMMITTEE (TRC)

Date: 30th March, 2026
Time: 2:30 PM onwards
Venue: Online mode

Agenda.1. Amendment to Hazardous and other Waste (Management and Transboundary Movement) Rules, 2016 by Department of Chemicals and Petrochemicals (DCPC), Ministry of Chemicals and Fertilizers.

Department of Chemicals and Petrochemicals (DCPC) *vide* D.O. letter dated 27th January, 2025 and 03rd April, 2025 has inter-alia requested deletion of entry pertaining to Brine Sludge listed at S.No.16.3 of Schedule I (List of Processes generating hazardous wastes) under Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016. It was mentioned that this issue had been examined at their end through multiple stakeholder discussions.

2. It was further mentioned that the production of caustic soda and chlorine is listed in Schedule I of the Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 (at S. No. 16) as excerpted below:

S. No.	Processes	Hazardous Waste
(1)	(2)	(3)
16.	Production of caustic soda and chlorine	16.1 Mercury bearing sludge generated from mercury cell process 16.2 Residue or sludges and filter cakes 16.3 Brine sludge

3. The issue inter-alia was discussed in a meeting held in the Ministry on 30th May 2025, under the co-chairpersonship of the Secretary, Department of Chemicals and Petrochemicals (DCPC) and the Secretary, MoEF&CC. Concerned officers of MoEF&CC, DCPC and CPCB were present in the meeting. In the meeting, after division on the issue, it was decided that the matter would be referred to TRC for deliberations and suitable recommendations regarding deletion of entry at 16.3 of Schedule I from the HOWM Rules, 2016.

4. In view of the above, matter was referred to the TRC for deliberations and suitable recommendations. Accordingly, the matter was discussed in 94th meeting of TRC held on 14th July, 2025. ***TRC after deliberation on the matter asked DCPC to provide latest characterization details of Brine Sludge from the industry's stakeholders. The committee also recommended that samples may be collected/ drawn by CPCB from a suitable number of industries generating brine sludge and analyzed for parameters given in Schedule II of HOWM Rules, 2016. On receipt of the analysis result from CPCB, and requisite information from DCPC the matter will be reconsidered for further deliberation/discussion.***

5. Thereafter, CPCB, *vide* its communication dated 10.12.2025, submitted the analysis report in respect of brine sludge samples collected from six caustic soda manufacturing plants. CPCB has informed that the samples were analysed for the parameters (viz pH, Fluoride, Cu, Zn & heavy metals including As, Ba, Cr, Pb, Hg etc) as per Schedule II of the Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 The analysis results of Brine sludge reveals that the concentration of all analysed parameters was found to be within the prescribed limits under the said Schedule of HoWM Rules, 2016 as amended from time to time.

In view of the above, the matter is placed before the TRC for deliberation/decision in the matter.

Agenda.2. Crumb rubber modifier (CRM) to be blended in bitumen for use in road construction in view of the recommendation given in circular Economy Report on 'Tyre and Rubber Recycling Industry' and subsequent Circular Economy Action Plan Finalized by NITI Aayog.

Circular Economy Report on 'Tyre and Rubber Recycling' submitted to NITI Aayog by MoEFCC inter-alia recommends use of Crumb Rubber Modified Bitumen (CRMB) in road construction.

2. A representation was received from Material Recycling Association of India (MRAI) for promoting use of CRMB recovered from waste tyres for building Green Roads. The matter was initiated in 76th TRC held on 24.01.2023 & then deliberated in 78th TRC held on 17.05.2023. Ministry after discussing the matter in Technical Review Committee (TRC) constituted in the Ministry, had issued an Advisory on 07.06.2023 to Chief Secretaries of All States/UTs and Secretary, Ministry of Road, Transport and Highways (MoRTH) that CRMB may be used in road construction by all the agencies wherever it is feasible, practicable, meet the quality standards and also keeping in view the cost effectiveness of the material and also to achieve the goal of Circular Economy. MoRTH was also requested *vide* OM dated 07.06.2023 to further examine the practical issues in consultation with all stakeholders and identify and initiate steps for a wider use of CRMB.

3. The issue of mixing of certain percentage of Crumb Rubber Modifier (CRM) with bitumen to promote CRMB in road construction was raised at several forum. Therefore, Ministry referred the matter to TRC for discussion and recommendation as appropriate for mandating blending of certain percentage of Crumb Rubber Modifier in bitumen. Subsequently, a reference received from Secretary, Ministry of Road, Transport and Highways (MoRTH) vide DO letter dated 17th February 2025 inter-alia alia suggested that a certain percentage of crumb rubber modifier (CRM) should be mixed with bitumen for sale. The suggested mandates would ensure a consistent supply of CRMB and meet the demands of road construction. The same was also referred to TRC.

4. The matter was discussed by TRC in its 91st, 92nd & 93rd meeting held on 28.01.2025; 28.02.2025 and 27.03.2025 respectively.

5. ***TRC in its 94th TRC held on 14th July, 2025, has carefully considered this subject opined that the recommendations of MoRTH for mandatory mixing of certain percentage of Crumb Rubber Modifier (CRM) with bitumen has to be considered from all aspects including the environment and sustainability perspective. In view of the strong recommendations of the MoRTH, the committee recommends that the producers of bitumen may be given minimum annual CRM utilization mandate of 3-5% of their total annual bitumen production in a phased manner starting from FY 2026-27 at the refinery level for production of crumb rubber modified bitumen (CRMB) as per BIS standards i.e. for FY 2026- 27 – 3%, for FY 2027-28 – 4% and for FY 2028-29 and onwards – 5%. However, before making such statutory provisions, MoRTH and MoPNG may be consulted by the Ministry.***

6. Accordingly, as per the recommendation of TRC and approval of competent authority in the Ministry, draft amendment in Waste Tyre EPR Rules was sent to MoRTH and MoP&NG for their comments/suggestions in August, 2025. Thereafter, MoRTH *vide* OM dated 18.08.2025 and MoP&NG *vide* OM dated 17.11.2025 provided the following inputs/suggestions:-

MoRTH	MoP&NG
• MOEF&CC may estimate the annual availability of quality CRM produced from End-of- Life Truck Tyre i.e. passing 100% from 600 micron sieve, which is suitable for blending into bitumen to	• That CRMB exhibits poor compatibility between Crumb Rubber and Bitumen, necessitating its use within 6-8 hours of production. In some instances, it has also been observed that customers do not

produce CRMB. Considering the same as well as other valued reuse of CRM, the % of mandation may be decided. • The producers of bitumen may be given annual CRM utilisation mandate of 0.5-1.0% of their total bitumen production in a phased manner starting from FY 2026-27 at the refinery level for production of crumb rubber modified bitumen (CRMB) as per BIS standards i.e. for FY 2026-27-0.5%, for FY 2027-28-0.75% and for FY 2028-29 and onwards-1.0%.	accept CRMB products from Refinery, as the mixing process needs to be constantly monitored to achieve the desired composition. Moreover, the longer setting time causes extended blockage of National Highways. Additionally, CRMB is not price-competitive. Hence, it is recommended that CRMB production facilities be located near the application sites. Prolonged storage or transportation leads to the settling of rubber particles, rendering the product unsuitable for use. • Considering the extremely short shelf life (6-8 hours) of CRMB, it is advisable to install CRMB production facilities near consumption centres rather than at Refineries. Refineries may supply the required grade of base bitumen to these CRMB production units, It is also informed that with the existing infrastructure, OMCs will not be able to meet the proposed mandate for FY 2026-27, which requires annual CRM utilization equivalent to 3% of total bitumen production.

7. It was observed that comments received from MoRTH and MoP&NG is not fully aligned with the recommendation given by TRC and draft notification shared by the Ministry after approval of competent authority. Therefore, Ministry again referred the matter to TRC for further deliberation/discussion and recommendation as appropriate.

In view of the above, the matter is placed before the TRC for deliberation/decision in the matter.

Agenda.3. Request for withdrawal of distance criteria for setting up of Treatment, Storage and Disposal Facility (TSDF) - Representation from Jigani Industries Association, Bengaluru and Kanara Chamber of Commerce & Industry (KCCI), Mangaluru.

Jigani Industries Association, Bengaluru and Kanara Chamber of Commerce & Industry (KCCI), Mangaluru *vide* their letters dated 21.04.2025 and 22.04.2025 respectively have requested for withdrawal of distance criteria for setting up of Treatment, Storage, and Disposal Facility for hazardous waste. It is mentioned that Micro, Small and Medium Enterprises (MSMEs) are facing significant financial and logistical challenges due to the limited number and remote location of Treatment, Storage, and Disposal Facilities (TSDFs) leading to high operational costs, greater environmental risks, and compliance difficulties.

2. The Ministry O.M. dated 20.06.2013 and 29.08.2016 mandates a minimum distance of 400 km between new and existing common TSDFs for hazardous wastes. This restriction has prevented the establishment of additional TSDFs particularly in industrially underserved regions and further restricted the development of essential infrastructure and created a compliance and cost burden for industries across Karnataka. Many states like Gujarat, Maharashtra, U.P. W.B. and Rajasthan, multiple TSDFs operate within 400 km of each other,

enabling better waste management without compromising environmental safety.

3. In light of above, it is requested to withdraw or revise O.M. dated 20.06.2013 and 29.08.2016 and approve or allow for the establishment of new TSDF facility in Central Karnataka to cater to Coastal and Central districts.

4. ***The matter was discussed in 94th TRC meeting held on 14th July, 2025, after deliberation the committee recommends CPCB to consult with all SPCBs and ask them to make assessment of the residual capacities of the current TSDFs, give their views on adequacy of TSDF facilities and appropriateness of their charges, future projection of generation of hazardous wastes and need for new TSDF facilities and other details. The committee also recommended prioritizing states like Karnataka and Haryana from where specific representations have come. In view of the aforesaid, the Committee felt that the matter may be taken after the receipt of requisite inputs/ information.***

5. Thereafter, CPCB compiled inputs from various SPCBs including Gujarat, Maharashtra, Haryana, Himachal Pradesh, Andhra Pradesh, Kerala and Punjab regarding the distance criteria for setting up of TSDFs, which indicate that the adequacy and availability of TSDF facilities vary across States.

In view of the above, the matter is placed before the TRC for deliberation/decision in the matter.

Agenda.4. Representation from Petroleum Re-refiners Association of India (PRAI) for amendment in Rule 3 (39) in Hazardous and Other Wastes (Management & Transboundary Movement) Rules, 2016 as amended from time to time w.r.t definition of 'waste oil'- reg.

Petroleum Re-refiners Association of India (PRAI) in their representation stated that in the re-refining process, distillation is employed to recover useful lubricants from the used oils. In In India this by-product is regulated as a Hazardous waste. World over bottom residues are blended with Asphalt for road making. Apart from this there are numerous other uses including blending with fuel. To which this by-product can be utilized, leading country to save huge amount of foreign exchange and in the process, help conserve finite resources. In view of finding a way for disposal of this by-product they got bottom residue tested for hazardous content and have submitted following in favour of use of bottom residue:

(i) In all the test reports the by-products meets the specification as laid out in Part B of Schedule V of HOWM Rules, 2016.

(ii) The test report of Rubber board, whose test report too indicates that the bottom residue can safely (REACH Compliant), be used for Rubber goods making as non-hazardous products.

In view, PRAI has proposed the following change in the definition of 'waste oil':

Existing Rule 3.(39)	**Suggested Rule 3.(39) after change**
'Waste Oil' means any oil which includes spills of crude oil, emulsions, tank bottom sludge and slop oil generated from petroleum refineries, installations or ships and can be used as fuel in furnaces for energy recovery, if it meets the specifications laid down in Part – B of Schedule V either as such or after reprocessing	**'Waste Oil'** means any oil which includes spills of crude oil, emulsions, tank bottom sludge**, bottom residues from re-refineries** and slop oil generated from petroleum refineries, installations or ships and can be used as fuel in furnaces for energy recovery, **or any other uses if meets "End Product Specification",** And, if it meets the specifications laid down in Part – B of

	Schedule V either as such or after reprocessing

AGENDA ITEM No. 5: ANY OTHER ITEMS WITH PERMISSION OF THE CHAIR

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