<u>Central Pollution Control Board</u> Waste Management - II Division, Delhi

- <u>Sub</u>: Minutes of the 27th virtual meeting of the Technical Expert Committee (TEC) for "Evaluation of proposals for utilization of hazardous wastes under Hazardous and Other Wastes (Management and Transboundary Movement) (HOWM) Rules, 2016".
- 27th meeting of TEC for "Evaluation of proposals received from various industries for utilization of hazardous wastes under Rule 9 of HOWM Rules, 2016" was held virtually on December 7th & 8th, 2021.
- 2. Sh. Anil C. Ranveer, Member Convener & Sc. E, Waste Management-II Division, CPCB, Delhi, welcomed the Chairman and members of the committee. List of the participants is enclosed at <u>Annexure A</u>.
- 3. M/s Green Environment Services Co-op. Soc. Ltd. (CETP), Vatva, Gujarat, has presented their representation regarding utilization of Poly Aluminum Chloride (PAC) as a flocculent in ETP/CETP. The unit representative informed that as per recommendation of 13th TEC meeting they had carried out repeated trial run. Also in due course of time they have installed Fenton reactor, which helps in meeting the norms as prescribed by GPCB. GPCB has also recommended for utilization of PAC as a flocculent in ETP/CETP, as the quantum of PAC is less.

After deliberation, committee observed that addition of PAC should not account for additional pollution load in the effluent. The treated effluent shall meet the discharge standards.

The committee recommended that source of generation of PAC, its quantum and quality shall be assessed by the SPCB/PCC before granting authorization to the unit. Also recommended that if online continuous emission/effluent monitoring system (OCEMS) exceeds the limits prescribed by the SPCB during operation then PAC dosing shall be aborted immediately.

The committee recommended for finalization of Standard Operating Procedure (SoP) on receipt from GPCB, after inclusion of above suggestions.

4. GPCB requested TEC to consider its representation regarding inclusion of Spent HCl in existing SoP for "utilization of spent sulphuric acid generated from dye & dye intermediates industries and chemical manufacturing industries as neutralizing agent in Effluent treatment plant (ETP/CETP)".

After deliberation, committee observed that, utilization of spent HCl may results in increasing chloride instead of sulphates as per the existing SoP for utilization of spent H₂SO₄. The source of generation of spent HCl, its quantum and quality (COD, TOC, Heavy metals, toxicity, acidity, etc.) shall be assessed by the SPCB/PCC before granting authorization to the unit as per the existing SoP for utilization of spent H₂SO₄.

The committee recommended for revision of existing SoP by inclusion of spent HCl on receipt of revised SoP from GPCB.

5. SoPs & Checklist of Minimal Requisite facilities for utilization of hazardous waste prepared by WM-II Division, CPCB, based on trial study reports were reviewed by TEC. Details of the same and recommendations of the committee are as below:

Sl. No.	Draft SoP	TEC Recommendations	
1.	SoP for utilization of Spent Aluminium Chloride (generated from dyes & dyes intermediate, pesticides,	Upon deliberation the committee suggested for following measures during revision of SoP:a) In Table 1 characteristics of spent aluminum chloride shall be included in place of spent Acid and the parameters like heavy metals, BOD, COD etc. are mentioned as not detected (ND).	
	pharmaceuticals, chemical industries) in manufacturing of Poly Aluminum Chloride	However, the range of analysis of all such parameters shall be mentioned in analysis report in place of ND.b) It should be mandated to provide two stage	
	(PAC)	activated carbon treatment for removal of organic compound from spent aluminium chloride.	
		c) The quantum & quality of activated carbon/ Spent Aluminium Chloride shall be assessed by concerned SPCB.	
		 d) Revision of existing SoP for Utilization of Spent Aluminium choloride generated during manufacturing of 4, 4- Diaminobenzenesulfanilide (DABSA) in manufacturing of CPC Green and 2, 4, 6- TrimethylBenzoyl Choloride by including source of generation of hazardous waste. 	
		The committee recommended for revision of existing SoP on receipt from GPCB after incorporating above suggestions.	
2.	SoP for utilization of ETP sludge generated from fertilizer industry for manufacturing of	The committee observed that fertilizer industrie may generate oily & non-oil sludge. The utilization of non-oily sludge shall be considered only after segregation of the sludge by the concerned unit.	
	DAP/NPK Fertilizer.	It was also observed that ETP sludge of fertilizer industry might contain Arsenic and Cadmium along with other heavy metals, which shall be ensured within prescribed limit as per FCO, 1985 of product.	
		· · ·	

		The Committee also suggested that, optimum level of ETP sludge utilization shall be restricted up to 3.5% of total raw material. The committee recommended for finalization of SoP after incorporating above suggestions.
3.	SoP for utilization of Spent Lithium Ion Battery for Recovery of Cobalt, Manganese, Nickel & Lithium	Upon deliberation, the committee discussed about various national as well as international existing practices and scenarios and also the trial run carried out at the unit. The committee is in opinion that, the proposal for utilization of utilization of Spent Lithium Ion Battery for Recovery of Cobalt, Manganese, Nickel & Lithium is not in the ambit of committee and suggested for preparation of guidelines in consultation with concerned divisions of CPCB.
4.	SoP for utilization of Used Oil and Off Specification Products (Shampoo, Detergent & Creams) for recycling	Upon deliberation, the committee observed that, the utilization process involved is physical changes in the off-specification products (i.e. addition of colour). The Committee also, observed that, CPCB has published guidelines for recycling of used oil and waste oil. However, the trial run has been carried out for recycling of used oil by the method prescribed for waste oil in the said guideline. The committee suggested for clarification from the unit for possible source of fugitive emissions in plastic shredding and granulation area such as Benzo(a)pyrene and PM. The committee recommended for finalization of SoP on receipt of clarification from the unit.
5.	SoP for utilization of L.D. Sludge, L.D. Classifier Sludge and Blast Furnace Flue Dust for manufacturing L.D. Sludge agglomerates	Upon deliberation, the committee observed that CPCB has published SoP for similar utilization process. However, the current proposal deviates w.r.t. removal of moisture by heating, rather than cold briquetting process in existing SoP. The Committee suggested for provision of Cyclone separator as air pollution control device at the chamber kiln as a precautionary measure to keep the emission of PM below 100 mg/Nm ³ . The category of hazardous waste shall be categorized as 35.1 of Schedule-1 of HOWM Rules, 2016.

		Further, the moisture content of hazardous waste shall be maintained at 15% while handling and storage before processing, to avoid dust generation. The committee recommended for finalization of SoP after incorporating above suggestions.
6.	SoP for utilization of L.D. Sludge as additional raw material (along with iron ore) in the manufacturing of iron ore pellet	Upon deliberation, the committee observed that stack emission monitoring results exceeding the prescribed limits.
		The committee suggested for modification in the process/APCD by the unit to meet the prescribed standards. The modification carried out by the unit shall be verified by SPCB, Odisha.
		The committee recommended, to repeat the trial run by SPCB, Odisha jointly with RD-CPCB, Kolkata with same protocol.
7.	SoP for utilization of Aluminium Dross for production of Aluminium metal and Aluminium oxide	With the permission of Chairman, a table agenda regarding finalization of SoP for utilization of Aluminium Dross for production of Aluminium metal and Aluminium oxide briquette has been placed before the committee.
	briquette	The committee has deliberated over the joint inspection report carried out by CPCB and SPCB Odisha at M/s Runaya LLP, Odisha on 14 th -17 th September, 2021.
		The committee observed that the inspection report comprises of material balance, emission monitoring and verification of ammonia emission curtailment measures.
		The Committee suggested to make provision of Wet Scrubber after Bag Filter in series to control emission of Ammonia from the process of Stage-III while utilizing the Aluminium Dross rejects for making Briquette.
		The committee recommended for finalization of SoP after incorporating above suggestions.

6. The meeting ended with vote of thanks to chair.

22564/2021/WM-II-HO

<u>Annexure A</u>

CENTRAL POLLUTION CONTROL BOARD DELHI- 110 032

List of Participants

SI.	Name	Designation and Organization	Member of the
No			Committee /
			Invitee
1.	Dr. R.K. Singh	Retired Scientist 'F', Bureau of Indian	Chairman
		Standard, New Delhi	
2.	Dr. C.S. Sharma	Former Additional Director, CPCB, Delhi	Member
3.	Prof. Kamal Kishore	Department of Chemical Engineering,	Member
	Pant	Indian Institute of Technology, Delhi	
4.	Dr. A K Swar	Chief Environmental Engineer, State	Member
		Pollution Control Board, Odisha	
5.	Sh. D. M. Thaker	Unit Head, Hazardous Waste Cell, Gujarat	Member
		Pollution Control Board, Gujarat	
6.	Sh. Dinabandhu Gouda	Head, IPC-I, CPCB, Delhi	Member
7.	Sh. Anil C Ranveer	Scientist E, WM-II Div., CPCB, Delhi	Member
	•		Convener
8.	Sh. A. Sudhakar	Head, WM-II, CPCB, Delhi	Invitee
9.	Sh. Gurnam Singh	Scientist E, CPCB-RD, Chandigarh	Invitee
10.	Sh. Sandeep Roy	Scientist D, CPCB-RD, Kolkata	Invitee
11.	Sh. Debabrata Das	Scientist B, CPCB-RD, Kolkata	Invitee
12.	Sh. Toufic Aslam	Scientist B, CPCB-RD, Kolkata	Invitee
13.	Sh. Mohd Salik	SRF, WM-II Division, CPCB, Delhi	Invitee
14.	Sh. M. V. Srinivas	JRF,WM-II Division, CPCB, Delhi	Invitee

374