

Central Pollution Control Board
WM - II Division, Delhi

Sub: Minutes of the Fourteenth Meeting of the Technical Expert Committee for “Evaluation of proposal for utilization of the hazardous and other wastes under Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016”.

1. Fourteenth meeting of the Technical Expert Committee on “Evaluation of proposal for utilization of the hazardous and other wastes under Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016” was held at CPCB, Delhi on 27.09.2018. List of the participants is enclosed at Annexure A.
2. The following 03 draft Standard Operating Procedures (SoPs) & Check list of Minimal Requisite facilities for utilization of hazardous waste, prepared by WM-II Div., CPCB, based on trial study report, were reviewed by TEC. Details of the same and recommendations of the TEC are as below:

Sl. No.	Agenda	TEC Recommendation
1.	Standard Operating Procedure (SoP) for utilization of Spent Alkali Bromide and Spent Acidic Bromide (generated during manufacturing of pesticides, pharmaceuticals and organic chemicals) for recovery of Bromine.	SoPs & Checklist of Minimal Requisite Facilities for the said utilization, as recommended by TEC, after incorporating suggestions, is given at <i>Annexure – I</i>
2.	Standard Operating Procedure (SoP) for utilization of Spent Ammonium carbonate (generated during manufacturing of Copper Pthalo Cyanine (CPC Blue) for production of zinc carbonate and copper carbonate.	SoPs & Checklist of Minimal Requisite Facilities for the said utilization, as recommended by TEC, after incorporating suggestions, is given at <i>Annexure – II</i>
3.	Standard Operating Procedure (SoP) for utilization of Spent Sulphuric Acid (generated from pigment alpha blue (dye intermediates) manufacturing process) to be used as neutralizing agent in ETP/CETP.	The committee reviewed report of the trial run monitoring conducted for the said utilization in the presence of CPCB and Gujarat PCB during 28 th June - 01 st July, 2018. The committee observed that there is no major variation in the analysis result of ETP effluent due to utilization of spent acid. Realizing that applicability of the proposed SOP developed based on the above trial run would be to Spent Acid generated from limited source of generation viz. pigment alpha blue

R. K. Singh

		<p>(dye intermediate), the committee discussed and recommended that applicability of the said SOP may also be expanded to Spent Acid generated from other dye & dye intermediates industries and chemical manufacturing industries by stipulating characteristics of inlet effluent (in case of CETP) and outlet standards (in case of ETP) where such Spent Acid would be used.</p> <p>After detailed discussion, the revised SOP, generalizing sources of generation of Spent Acid i.e. from dye & dye intermediates industries and chemical manufacturing industries and utilization of the same as neutralizing agent in ETP/ CETP, along with inlet effluent (in case of CETP) and outlet standards (in case of ETP) and other procedures/conditions to be followed by SPCB/PCC for each such utilization cases, as recommended by the Committee is given at <i>Annexure – III.</i></p>
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3. The following applicants were requested to make technical presentation about their utilization proposal before the committee:

- (i) M/s RFC Industries, Plot No. 830/19, GIDC Jhagadia Megha Estate, Tal. Jhagadia, Dist.: Bharuch, Gujarat- 393 110.
- (ii) M/s MS Drums Suppliers, 26/5/F, A.M. Ghosh Road, Budge, Kolkata-700107

The above listed applicants made technical presentations before the committee.

The details of the proposals alongwith the recommendations of the committee on the above (i) and (ii) are given in ***Annexure-B.***

The meeting ended with vote of thanks to and from the Chair.

R. K. Singh

Annexure A**CENTRAL POLLUTION CONTROL BOARD
DELHI- 110 032****Date: September 27, 2018****Venue:** Committee Room, Fifth Floor,
Parivesh Bhawan, CPCB, Delhi- 110 032**List of Participants**

Sl. No	Name	Designation and Organization	Member of the Committee / Invitee
1.	Dr. R.K. Singh	Retired Scientist 'F', Bureau of Indian Standard, New Delhi	Chairman
2.	Sh. D.M. Thaker	Hazardous waste management, Gujarat Pollution Control Board, Gandhinagar	Member
3.	Sh. Vinod Babu	Additional Director, Waste Management-I Division, CPCB, Delhi	Member
4.	Sh. Dinabandu Gouda	Additional Director, IPC-I Div, CPCB, Delhi	Member
5.	Dr. C.S. Sharma	Ex. Additional Director, CPCB, Delhi	Member
6.	Sh. B.R. Naidu	Regional Director, CPCB, Vadodara	Invitee
7.	Sh Bharat K Sharma	Additional Director & Head, WM-II Div, CPCB, Delhi	Member Convener
8.	Ms P K Selvi	Scientist 'D', WM-II Div, CPCB, Delhi	Invitee
9.	Ms Deepti Kapil	Scientist 'C', WM-II Div, CPCB, Delhi	Invitee
10.	Ms Rupali Gupta	Junior Research Fellow, WM-II Div, CPCB, Delhi	Invitee
11.	Sh Varun Prabhu	Junior Research Fellow, WM-II Div, CPCB, Delhi	Invitee

Annexure BRecommendation of the committee for approval of proposals under Rule 9 of the Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016.

Sl. No.	Name of the Industry	HW as Raw Material	Product	Process	Recommendations
1.	M/s RFC Industries, Plot No. 830/19, GIDC Jhagadia Megha Estate, Tal. Jhagadia, Dist.: Bharuch, Gujarat-393 110.	Mixture of spent alkali halide ('KF + KCl' and 'KF + KBr') (hazardous waste category C4 as per the Schedule II of Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016) generated during manufacturing of Penta fluoro benzoic acid, Triflic acid and 1,1,1,2,3,3,3-heptafluoro-2-propyl aniline.	Mixture of spent alkali halide will be used to produce pure alkali halide (KF and KBr or KCl).	Spent alkali halide is mixed with water in the reaction vessel with continuous mixing for up to 5-6 hours at a temperature of 60°C. After mixing, the solution is passed through filter press to remove the filter cake as waste. The filtrate sent to the stainless steel reactor is heated up to 115°C followed by cooling in the same tank. After cooling, slurry is transferred into centrifuge and the mother liquor from centrifuge is taken into drier for producing powdered Potassium Fluoride (KF). The solid precipitate from centrifuge is either KCl or KBr depending upon the hazardous wastes that have been used (i.e. KCl+KF or KBr+KF).	<p>The committee observed that the information provided by applicant is not complete w.r.t. the following:</p> <ol style="list-style-type: none"> Information on the hazardous waste utilization process with write up and flow diagram explaining working principle of evaporator and boiler along with operational parameters residence time, pressure, temperature etc. Complete assay report of the hazardous wastes (i.e. spent alkali halide) with individual concentration of all raw material/ products and by-product/ heavy metals/ possible organic compounds utilized in generation process of each of the spent alkali halides during production of Penta fluoro benzoic acid, Triflic acid and 1,1,1,2,3,3,3-heptafluoro-2-propyl aniline. Details about recycling of condensate water, characteristics of condensate water w.r.t constituents that may add onto the condensate water after recycling and disposal arrangement of the same. Complete assay report of the product (i.e. KCl, KBr and KF) with individual concentration of all raw materials/products/possible organic compounds utilized during each of the generation processes. <p>In view of the above, the committee recommended that the unit shall submit complete information and also install Air Pollution Control Device for dryer</p>

R. K. Singh

Sl. No.	Name of the Industry	HW as Raw Material	Product	Process	Recommendations
					alongwith photographs and videos to CPCB. Upon receipt of the above complete information including photographs and videos in support of the above installation, the applicant may be invited in the subsequent TEC meeting.
2.	M/s M.S. Drum Suppliers, 26/5/F, A.M. Ghosh Road, Budge, Kolkata-700107	Empty barrels/ drums contaminated with oil/lubricants; category: under 5.1 Schedule-I of HOWM Rules, 2016 generated from Industrial operations using mineral or synthetic oil as lubricant in hydraulic systems or other applications	Cleaned drums to be reused for refilling of oil/lubricants	Contaminated drums to be cleaned manually by using detergent and caustic with hot water followed by fresh water cleaning. The wastewater generated from the process is proposed to be treated in effluent treatment plant and the unit follows zero discharge system.	The committee observed that the methodology used for cleaning the contaminated drums is not technically appropriate, thus the committee recommended that the applicant shall revise its proposed manual drum cleaning by incorporating Drum draining / physical cleaning process for residual oil, nozzles, pumps, details of waste water treatment plant, fugitive emission control system in case of fugitive emissions, etc. and submit the same to CPCB Upon receipt of the above revised proposal in the prescribed format for making application under Rule of the HOWM Rules, 2016, the matter may be discussed in subsequent meeting of TEC.

R. K. Singh