

**Central Pollution Control Board**  
**HWM Division, Delhi**

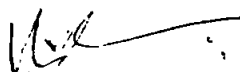
**Sub: Minutes of the Sixth Meeting of the Technical Expert Committee for "Evaluation of proposal for utilization of the hazardous wastes under Rule 11 of the Hazardous Waste (Management, Handling & Transboundary) Rules, 2008".**

1. The Sixth Meeting of the Technical Expert Committee on "Evaluation of proposals for utilization of the hazardous wastes as a supplementary resource or for energy recovery, or after processing" was held at CPCB, Delhi on 05.09.2012. List of the participants is enclosed at **Annexure I**.
2. Shri B. Vinod Babu, Senior Environmental Engineer & I/c HWMD, welcomed the members and invitees of the Committee and informed that 06 applications (new cases) have been received for approval for utilization of HW under Rule 11 of the HWM Rules 2008 and the applicants have been asked to make technical presentation before this committee:
  - (i) M/s Suraj Products Limited, Odhisha
  - (ii) M/s J.B.R Tech. Pvt. Ltd., Ludhiana
  - (iii) M/s M.K Organics Pvt. Ltd, Rajasthan
  - (iv) M/s Green Living , Visakhapatnam
  - (v) M/s Parara Udyog, Uttar Pradesh
  - (vi) M/s Indrox Global Pvt. Ltd., Maharashtra

Further, as suggested by the Committee in earlier meetings, the following 03 applicants (old cases) were also requested to make presentation before the committee:

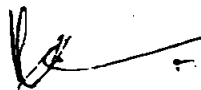
- (vii) M/s Hindustan Platinum Pvt. Ltd, Mumbai
- (viii) M/s Sterlite Industries (I) Ltd, Tamil Naidu
- (ix) M/s Vinayak Chemicals, Rajasthan

3. The applicants listed at (i) to (viii) above made technical presentations before the committee. The committee also reviewed some of the old cases alongwith the aforesaid new proposals. The details of the proposals alongwith the recommendations of the committee are given at **Annexure - IIA & IIB** respectively.
4. The recommendations of the committee regarding grant of approval for utilization of hazardous waste subsequent to the trial runs/ inspections by CPCB/SPCB are given at **Annexure - III**.
5. With regard to the decision taken in the 5<sup>th</sup> meeting of TEC held on 13.06.2012, on the proposals for utilization of Used/Waste Anode butt generated from Aluminum industry, the committee recommended that besides its utilization as ingredient for electrode carbon paste for Ferro-Alloy furnace and anode baking units, the same can also be permitted for utilization as carbon source in steel melting furnaces after fluoride removal in environmentally sound manner.
6. The committee also discussed the 02 cases where applicants were given thirty days period for submission of information for processing the utilization proposal failing which the utilization proposal shall be deemed to be withdrawn by the applicant. As, there was no response from the applicants, it was decided that the matter may be closed and the



unit be informed accordingly. The list of such cases and details are given at Annexure – IV.

7. The Meeting ended with vote of thanks to and from the chair.

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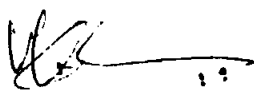
**Annexure I****CENTRAL POLLUTION CONTROL BOARD  
DELHI- 110 032****Date:** September 05, 2012**Venue:** 2<sup>nd</sup> Floor, Conference  
room, Parivesh Bhawan, CPCB,  
Delhi- 110 032**Sixth Meeting of the Technical Expert Committee for Evaluation of proposal for  
utilization of the hazardous wastes as a supplementary resource or for energy recovery,  
or after processing.****List of Participants**

<b>S. No</b>	<b>Name</b>	<b>Designation</b>	<b>Member of the Committee / Invitee</b>
1.	Shri R.K. Garg	Former Managing Director, Indian Rare Earths Ltd.	Chairperson
2.	Shri. K.P. Nyati	-	Member
3.	Sh. B. Sandilya	Advisor, PDIL, Noida	Representing Member of the committee on behalf of PDIL
4.	Dr. G.S Dang	Former Sc. F, Indian Institute of Petroleum, Dehradun	Special Invitee
5.	Sh. B. Vinod Babu	Senior Environmental Engineer & I/c HWMD, CPCB, Delhi	Member Convener
6.	Sh. Bharat K Sharma	Senior Environmental Engineer, HWMD, CPCB, Delhi	Invitee
7.	Ms. Deepti Kapil	Assistant Environmental Engineer (HWMD), CPCB, Delhi	Invitee



**Recommendation of the committee for New proposals for approval under Rule 11 of the Hazardous Waste (Management, Handling & Transboundary) Rules, 2008.**

S. No	Name of the Industry	HW as Raw Material & Product	Process	6 <sup>th</sup> TEC Recommendations
1.	M/s Suraj Products Ltd Village Barpali, Post. : Kesramal, Rajgangpur, Distt- Sundargarh, Orissa - 770017	Blast Furnace Flue Dust, GCP Sludge & LD Sludge/EAF dust to be utilized for manufacturing cold briquettes for further use in blast furnace	Blast Furnace Flue Dust, GCP Sludge & LD Sludge/EAF is used with iron ore fines, coke fines, manganese ore fines etc. for agglomeration along with binders i.e. cement/molasses/ bentonite etc. The agglomerated material is briquetted under vacuum & pressure and dried under normal atmospheric conditions for a few days and used in blast furnace as raw material substituting iron ore, coke and fluxes i.e. lime stone, dolomite etc.	The committee recommended that the unit may be allowed to operate on trial basis for one month by utilizing sludges of BF/LD/EAF/FAP collected in wet form. During this period, CPCB ZO Kolkata shall visit the unit to verify the utilization process, especially the storage, handling, charging facility provided for utilization of sludges, so that any additional measures if required may be stipulated accordingly.
2.	M/s JBR Technologies Pvt. Ltd. 2680, Jain Colony, Moti Nagar, Ludhiana	Spent acid containing sulphuric acid to be utilized for manufacturing Ferrous Sulphate	Spent acid containing sulphuric acid generated from the wire drawing industries is first reacted with Ferrous chips/granules to form Ferrous sulphate solution which is then filtered and the filtrate heated and concentrated to the required level by evaporating water from it The concentrated solution is then allowed to cool to form ferrous sulphate crystals.  The remaining from the crystallization process is again put into the process for further reaction, evaporation and crystallization.	The committee recommended that the unit shall install suction hood over the reaction tank followed by scrubber. Further, the applicant shall also provide the following information/documents:  <ol style="list-style-type: none"> <li>1. Details of storage facility and process area (i.e. flooring &amp; shed details).</li> <li>2. Copy of consent to establish/operate as obtained from Punjab Pollution Control Board.</li> <li>3. Characteristics of HW (i.e. Spent acid containing sulphuric acid) proposed for utilization.</li> <li>4. Details of safety gadgets &amp; pollution control devices installed.</li> <li>5. Material balance for utilization of spent acid containing sulphuric acid.</li> </ol> <p>After compliance with the above action points and submission of relevant documents &amp; photographs, permission for conducting trial run in presence of CPCB/ SPCB officials may be given.</p>
3.	M/s M.K. Organics Pvt. Ltd. FA-330 (D) M.I.A., Alwar-301030, Rajasthan	Spent Solvent to recover solvent	Fractional Distillation process to recover Solvent from Spent Organic Solvent	The committee recommended that the proponent shall take the following actions and submit the information/documents for the same:  <ol style="list-style-type: none"> <li>1. Details of safety gadgets &amp; pollution control devices installed.</li> <li>2. Carry out safety audit from a reputed agency and submit the report to CPCB;</li> <li>3. Details on feeding rate, quantity of residue generated and its management etc.</li> <li>4. Details w.r.t medium of condenser cooling, temperature, absorption column or any other system/ arrangement for control of VOC</li> </ol>



S. No	Name of the Industry	HW as Raw Material & Product	Process	6 <sup>th</sup> TEC Recommendations
				<p>emissions &amp; fire control, etc.</p> <ol style="list-style-type: none"> <li>5. Plan for utilization of recovered solvent.</li> <li>6. Details of Storage &amp; process area.</li> <li>7. Details on type/category as per Schedule I of the HWM Rules of each Spent Organic Solvent; their boiling point, characteristics, process and source of generation.</li> </ol> <p>It was also recommended that in case the solvent to be recovered is having boiling point of 100 °C and above, the unit may use water as cooling medium for condenser whereas for solvent with low boiling point, the unit shall install secondary condenser with chilled water/brine as cooling medium.</p> <p>Upon receipt of clarifications/information on the above, the trial run permission may be given by CPCB.</p>
4.	M/s Green Living 103, S.L. Towers, Nowroji Road, Maharanipeta, Visakhapatnam	Used Anode Butt to be utilized for manufacturing Blended Coke for carbon fraction addition in steel manufacturing industries.	The bath material on outer surface in the used anode butt is mechanically chipped off followed by crushing and sizing. This material is proportionately mixed with petroleum coke to manufacture blended coke.	<p>It was recommended that upon installation of sand blasting equipment along with pollution control system, the proponent shall inform CPCB. Upon verification of such installation by ZO, CPCB, permission for conducting trial run in presence of CPCB/SPCB officials may be given without referring the same again to the committee.</p> <p>Meanwhile, the proponent shall also submit the following information/documents:</p> <ol style="list-style-type: none"> <li>a) Details of fluoride and cyanide concentration in raw material (used anode butt), sand blasted material and the final product.</li> <li>b) Details on fugitive emission control system for controlling emissions during chipping, crushing and mixing operations.</li> <li>c) Name of the industries to whom Blended Coke will be sold.</li> <li>d) Details of quantity, storage of sand blasted material and mode of disposal.</li> <li>e) TSDF membership details.</li> </ol>
5.	M/s Parara Udyog, F- 195-196, Masoori- Gulawathi Road Industrial Area, Panchsheel Nagar, Uttar Pradesh	Reconditioning of discarded/used drums & container	The discarded/used drums & container are washed with diesel /water for further selling.	<p>The committee recommended that the unit shall submit the following information/documents:</p> <ol style="list-style-type: none"> <li>a) Details of the industries from where discarded/used drums &amp; container shall be collected for re-conditioning.</li> <li>b) Process details for reconditioning of discarded/used drums &amp; container.</li> <li>c) Type of discarded/used drums/containers (w.r.t size, shape and material) and their quantities and chemical material for which it is used.</li> <li>d) Quantity of effluent/ residue generated and mode of disposal.</li> <li>e) Details of users/industries to whom the re-conditioned drums/container will be sold.</li> <li>f) Details of storage and process area (i.e. flooring and shed details).</li> </ol>

S. No	Name of the Industry	HW as Raw Material & Product	Process	6 <sup>th</sup> TEC Recommendations
				<p>After receipt of the above information /photographs, the matter shall be discussed in the next meeting of TEC.</p>
6	<p>M/s Indrox Global Ltd. Plot no B-11, MIDC Industrial Area Tarapur Taluka- Palghar, Distt- Thane (Maharashtra)</p>	<p>Waste Pickle Liquor (Containing HCl) from Steel Pickling and Galvanising Units to be utilized for manufacturing Ferric Oxide and HCl regeneration.  Process Sludge (Iron Oxide) from M/s KMML, Kerala to be utilized for manufacturing of Ferric Oxide.</p>	<p>WPL is fed to roaster wherein Ferric Chloride is removed as particles from the bottom. The HCl fumes are absorbed in scrubber to re-generate HCl.  The Process Sludge (Iron Oxide) is washed with water in a tank to remove water soluble impurities and slurry is filtered and dried in a rotary dryer followed by grinding and packaging. The washed liquor will be used in roaster to produce Iron Oxide and re-generation of HCl.</p>	<p>The unit has submitted two separate processes for utilization of Waste Pickle Liquor (WPL) and Acidic Iron Sludge of M/s KMML, Kerala. However, the committee observed that regarding utilization of process sludge from KMML, Kerala, the plant machinery for the same is under installation.</p> <p>The committee recommended that ZO Vadodara alongwith SPCB shall visit the plant to verify the utilization process for utilization of WPL and suggest any additional measures, if required.</p> <p>With regard to utilization of acidic iron sludge from M/s KMML, the unit shall inform about completion of plant machinery installation so that trial run may be carried out.</p>



**Recommendation of the Technical Expert Committee on Old Cases for approval under the Rule 11 of the Hazardous Waste (Management, Handling & Transboundary) Rules, 2008**

S. No	Name of the Industry	HW utilized & Product manufactured	Process	Background & 6 <sup>th</sup> TEC Recommendations
1.	M/s Vinayak Chemicals G 1-21 & 22, IA, Sukher, Udaipur (Rajasthan)	Hydro Fluoro Silicic acid to be utilized for manufacturing Ammonium Bi Fluoride	Hydro fluoro silicic acid and ammonia gas are mixed in the reactor and maintained at temperature between 16-40 ° C. The material is filtered in a filter press from where the mother liquor is distilled through vacuum distillation process. This is then centrifuged followed by drying and grinding.	<p>The committee observed that the unit has not responded to CPCB's letters dated 21.08.2012 despite reminders dated 28.08.2012 for submission of the requisite information/documents and making technical presentation before the Technical Expert Committee (TEC).</p> <p>Accordingly, it was recommended that the unit may be given a final opportunity to respond within 15 days failing which the proposal shall be deemed to be withdrawn by the applicant.</p>
2.	M/s Sterlite Industries (I) Ltd SPICOT Industrial Complex, Madurai Bypass Road, T.V Puram, P.O Thoothukudi-Tamil Naidu-628002	Utilization of Tail Gas Cake by mixing it with phosphogypsum as a saleable product	The Tail Gas Scrubber cake generated from Sulphuric Acid plant is fed to the Oxidation tank where sulphites will be oxidized to form sulphates. This oxidized slurry will then be filtered to separate solids which will be mixed with gypsum and will be sold out.	<p>With regard to utilization of gypsum produced from Tail Gas Scrubber (TGS) by mixing with phosphogypsum to be used for soil conditioning, gyp-board, cement making etc., the committee, recommends grant of approval for utilization of Tail Gas Scrubber cake alongwith phosphogypsum in soil conditioning, cement plants, gyp-board manufacturing, etc. without any formal Visit/trial runs by CPCB, as per CPCB draft guidelines.</p>
3.	M/s Hindustan Platinum Pvt. Ltd., C-122, TTC Industrial Area, Pawane Village, Navi Mumbai-400703	Spent Precious Metal Catalyst to be utilized for manufacturing Precious Metal	Spent catalyst is leached in a reactor to generate metal compounds adopting suitable hydro-metallurgical process.	<p>It was recommended that the proponent shall submit the details on type/category as per Schedule I of the HWM Rules of each Spent Catalyst; their characteristics; source of generation.</p> <p>Upon submission of above mentioned information/documents, some members of the committee alongwith ZO Vadodara will visit the plant to verify the utilization process and suggesting any additional measures, if required.</p>
4.	M/s Vikas Fluorochem Pvt. Ltd., Plot No. B-27/C&D, Sec - C Industrial Area Sanwer Road Indore (M.P.)	Hydro Fluo Silicic acid to be utilized for manufacturing Sodium Silico Fluoride	Hydro fluo silicic acid and sodium chloride solution alongwith soda ash are mixed in the reactor which is then washed with water & salt solution. The washed product is centrifuged followed by drying and crushing to produce desired mesh size product.	<p>The committee discussed the reply submitted by the unit vide its letter dated 04.07.2012 in reference to CPCB's letter dated 29.05.2012 and observed that the hood &amp; scrubber have yet not been installed by the unit.</p> <p>Accordingly, it was recommended that the unit shall install hood over the reaction tank followed by scrubber and also provide the details of potential buyers of diluted HCl as toilet cleaner as proposed in their letter dated 04.07.2012.</p> <p>Further, it was not recommended to permit the option of discharge of wastewater (after treatment with hydrated lime followed by dilution with fresh water) into nearby drain.</p> <p>Upon compliance of above and submission of relevant information &amp; photographs, the matter shall be discussed in the next meeting.</p>

5.	M/s Hema Chemicals Industries 4/13, Industrial Estate, Gorwa, Baroda-390016 Gujarat	Spent Chromic acid to be utilized for manufacturing of Basic Chromium Sulphate	Spent acid is treated with Caustic soda and filtered through a filter press. Clear liquid of sodium chromate is used directly for producing basic chromium sulfate. Basic chromium sulfate plant consists of reactor and spray drier to convert the product in fine powder form.  Solid mass which is pure iron oxide is roasted at 500 ° C to form iron oxide pigment for further use in ceramic industries and automobile paint.	The committee recommended that since no response has been received from Gujarat SPCB against CPCB's letter dated 21.02.2012 and reminder letter 18.06.2012, a joint team (officials of ZO, Vadodara and Gujarat SPCB) shall visit the unit to verify whether M/s Hema Chemical Industries site exists in hazardous waste contaminated sites or not.  Upon receipt of the inspection report, the matter shall be discussed in the next meeting.
6.	M/s Uflex Ltd, Polyester Chips Plant L-1, Ghirongi, Malanpur Ind Area, Bhind -477 117 (M.P)	Ethylene Glycol Residue as a supplementary resource in captive industrial boiler	To be used as supplementary fuel alongwith Natural gas in captive boiler	The unit vide letter dated 16.06.2012 submitted the quarterly stack emission monitoring report and further requested to waive off the condition of submission of quarterly report as mentioned in CPCB's approval letter dated 13.02.2012 because of high monitoring cost. The matter was discussed by the committee and it was observed that all the results are well within the limits. The inspection report received from the ZO Bhopal was also discussed by the Committee.  Considering the fact that the trial run and subsequent monitoring results have demonstrated compliance, the committee recommended to waive off the condition of conducting quarterly stack emission monitoring and instead the same shall be carried out on yearly basis henceforth.  Further, w.r.t. ZO report, it was recommended that the unit shall be asked to improve the storage of Ethylene Glycol Residue.
7.	M/s Naini Tissue Limited, 7th K.M.Stone , Moradabad Road, Kashipur-244713 (Uttaranchal)  M/s Naini Paper Limited, 7th K.M.Stone , Moradabad Road, Kashipur-244713 (Uttaranchal)	ETP Sludge To be utilized for manufacturing Egg trays/Board	ETP Sludge and white process sludge is put in pulper & mixed with water to form pulp. This pulp is further stored in chest under agitation and taken to the moulding machine where wet board is moulded. After drying in sunlight it is calendered in the machine and further used for various purposes	The committee discussed the reply submitted by the unit vide its letter dated 20.06.2012 against CPCB letter dated 01.03.2012 and recommended to grant trial run permission for a period of seven days @ 4 T/day in presence of CPCB/ SPCB officials.

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**Recommendation of the Technical Expert Committee on Grant of approval after trial run under the provision of Rule 11 of the Hazardous Waste (Management, Handling & Transboundary) Rules, 2008**

S. No	Name of the Industry	HW as Raw Material & Product	Background	6 <sup>th</sup> TEC meeting recommendation
1.	M/s Jay Agro Industries Plot No 5805, GIDC, Ankeshwar, Distt - Bharuch, Gujarat-393002	Anode mud to be utilized for manufacturing of Manganese Sulphate.	The inspection report received from Zonal Office Vadodara was discussed by the committee.	<p>The committee observed that inspection report reveals:</p> <ul style="list-style-type: none"> <li>(i) leakages were observed from APCS installed with roaster unit;</li> <li>(ii) The 3 wet scrubbers installed for 6 roasters are leaking and one scrubber is not connected to stack</li> <li>(iii) The reaction vessel is not covered properly and scrubber attached to reaction tank is not vented.</li> <li>(iv) The bag filters are open type (within plant shed) which needs to be enclosed and vented to the roof top.</li> </ul> <p>The committee further observed that the vacuum evaporation unit is not operated and instead open pan heating is practiced.</p> <p>The committee, therefore, recommended that the unit shall upgrade the air pollution control devices against above observations and also commission vacuum evaporation unit ensuring adequate air pollution control measures. Further, open pan heating shall not be practiced.</p> <p>Upon completion of above and submission of relevant supporting photographs, another trial run shall be carried out in presence of CPCB/SPCB officials in accordance with trial run monitoring protocol as per CPCB's letter dated 03.06.2011.</p> <p>Further, the unit shall also submit the details of hazardous waste (Anode Mud) utilized, stored out of 138 MT of Anode Mud procured from M/s Hindustan Zinc Ltd., Chittorgarh (Rajasthan) for trial run.</p>

*[Handwritten Signature]*

**Cases for Closure of applications**

S.NO	Name of the Industry	6 <sup>th</sup> TEC meeting recommendations
1.	M/s Chaudhary Briquette Fuel Industries NS-8, 2nd Phase, Industrial Area, Adityapur, Jamshedpur	<p>As per the recommendation of the 4<sup>th</sup> TEC meeting held on 16.03.2012, the unit was given a final opportunity vide CPCB letter dated 31.05.2012 to submit the requisite information within a month failing which the proposal shall be deemed to be withdrawn by the applicant. The unit has not submitted the same.</p> <p>Accordingly, it was recommended that the matter may be closed and the unit be informed accordingly.</p>
2.	M/s Attero Recycling Pvt. Ltd. D-115, Sec 63, Noida, U.P. 201 301	<p>As per the recommendation of the 4<sup>th</sup> TEC meeting held on 16.03.2012, the unit was given a final opportunity vide CPCB letter dated 31.05.2012 to submit the requisite information within a month failing which the proposal shall be deemed to be withdrawn by the applicant. The unit has not submitted the same.</p> <p>Accordingly, it was recommended that the matter may be closed and the unit be informed accordingly.</p>

