

**Ministry of Mines**  
**Pilot Projects for Recovery of Critical Minerals from overburdens / tailings / fly ash / red mud etc.**  
**Technical Experts Cost Committee (TEC)**

**Minutes of TEC Meeting held on 26-11-2025**

1. The Ministry of Mines, through NMEDT, has released the “*Guidelines for Pilot Projects for Recovery of Critical Minerals from Overburdens, Tailings, Fly Ash, Red Mud, etc.*”, in alignment with the National Critical Minerals Mission (NCMM). These guidelines aim to enhance domestic availability of critical minerals by supporting pilot-scale mineral recovery initiatives (OM F. No. 122/1/2025-NMEDT/515 dated 14.11.2025).
2. In accordance with these guidelines, the Ministry invited applications from the designated Centre of Excellence (CoE) for setting up pilot projects in this domain.
3. JNARDDC, Nagpur—an autonomous body under the Ministry of Mines—was designated as the Project Management Agency (PMA) for the scheme. Under this mandate, a proposal was received from the Non-Ferrous Technology Development Centre (NFTDC), a designated CoE hub, titled:

**“Establishment of Pilot Line for Rare Earth Mineral(s) Separation from Multiple Feedstocks”**

4. To undertake technical evaluation of the proposal, the Ministry constituted a Technical Experts Committee (TEC). Following receipt of nominations from all organizations, the TEC (list at Annexure 1) convened via video conference on 26.11.2025, organized by JNARDDC in its capacity as PMA.
5. The proposal submitted by NFTDC was reviewed in detail by the TEC, covering technical feasibility, scope of work, proposed infrastructure, budgetary requirements, and alignment with NCMM objectives. Based on the deliberations, the TEC recommended the proposal for consideration by the Project Sanctioning Committee (PSC) for further necessary action.

## Ministry of Mines

## Pilot Projects for Recovery of Critical Minerals from overburdens / tailings / fly ash / red

mud etc.

Technical Experts Cost Committee (TEC)

## Details of Recommended Proposals for Consideration to PSC

Proposal Title	Establishment of Pilot Line for Rare Earth Mineral(s) Separation from Multiple feedstocks		
Institute Name	Nonferrous Materials Technology Development Centre (NFTDC), Hyderabad, Telangana		
Category	Centre of Excellence - Hub		
Project Lead	Dr K Balasubramanian		
Duration of project	24 months		
Objectives & Deliverables	<p><b>Objectives</b></p> <ul style="list-style-type: none"> <li>Strengthen NFTDC's beneficiation and solvent-extraction (SX) capabilities for recovery of major magnetic rare earth oxides (Nd, Pr, Dy, Tb, Sm+Gd) and integration with the REPM manufacturing line.</li> <li>Establish a pilot plant (100 kg batch input) for processing multiple feedstocks containing REE processing, covering physical separation, beneficiation, SX, and oxide production.</li> <li>Optimise process parameters for different feedstocks at pilot scale and ensure full feedstock utilisation with value-added by-products.</li> </ul>		<p><b>Deliverables</b></p> <ul style="list-style-type: none"> <li>Establishment of a modular Pilot Line (100–250 kg batch capacity) covering all separation and processing steps for REE recovery.</li> <li>Pilot-scale process optimisation for multiple feedstocks at NFTDC, and scale-up validation at partnering industry sites.</li> <li>Engagement with prospective industry partners (e.g., KMML, Midwest, SCCL) for processing their feedstocks once the pilot plant becomes operational.</li> <li>Provision for integrating a skill-development module.</li> </ul>
Industry Partners	Midwest, Kerala Minerals and Metals Ltd (KMML), SCCL		
Proposed Budget (in ₹ Lakhs)	Total budget: 1882	Industry Contribution : 381 (20%)	MoM Grant: 1501
Observation / Remarks:	<ul style="list-style-type: none"> <li>The proposed pilot project is well-conceived, with a strong technical foundation.</li> <li>The research team possesses significant domain expertise and has demonstrated a proven track record in executing similar projects.</li> <li>The Committee appreciates the Principal Investigator's emphasis on generating higher-value products from process rejects, rather than limiting utilisation to low-end applications.</li> <li>The committee suggests that NFTDC may consider engaging a specialised group to explore innovative, high-value conversion pathways for waste streams.</li> <li>As the proposal already includes an interested industrial partner, the Committee recommends that performance parameters of the pilot plant be jointly reviewed and validated by the industry partner to ensure alignment with commercial-scale deployment requirements.</li> <li>The proposal presents a promising opportunity for advancing domestic capabilities in rare-earth processing</li> </ul>		
Recommendation	<b>Recommended</b>		

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**TEC (Technical Evaluation Cost Committee) Meeting**

**Annexure 1**

**Participation details of TEC members**

<b>S No</b>	<b>Name</b>	<b>Designation &amp; Organization</b>	<b>Role</b>	<b>Remarks</b>
i)	Dr Anupam Agnihotri	Director, JNARDDC	Chairperson	Present
ii)	Shri Anshoo Pandey	Director (NCMM), Ministry of Mines	Member	Not Present
iii)	Shri Dinesh Kumar Thawait	DDG (NMH-Mission 2), GSI	Member	Present
iv)	Dr Ramanuj Narayan	Director, CSIR - IMMT	Member	Present
v)	Prof Sanjay Chandra	Professor of Practice, IIT Bombay	Member	Present
vi)	Prof Sagar Pal	Professor, IIT-ISM Dhanbad	Member	Present
vii)	Dr Vilas Tathavadkar	CTO, Hindalco Industries Ltd.	Member	Not Present
viii)	R Anil Kumar	Scientist, JNARDDC	Convenor	Present