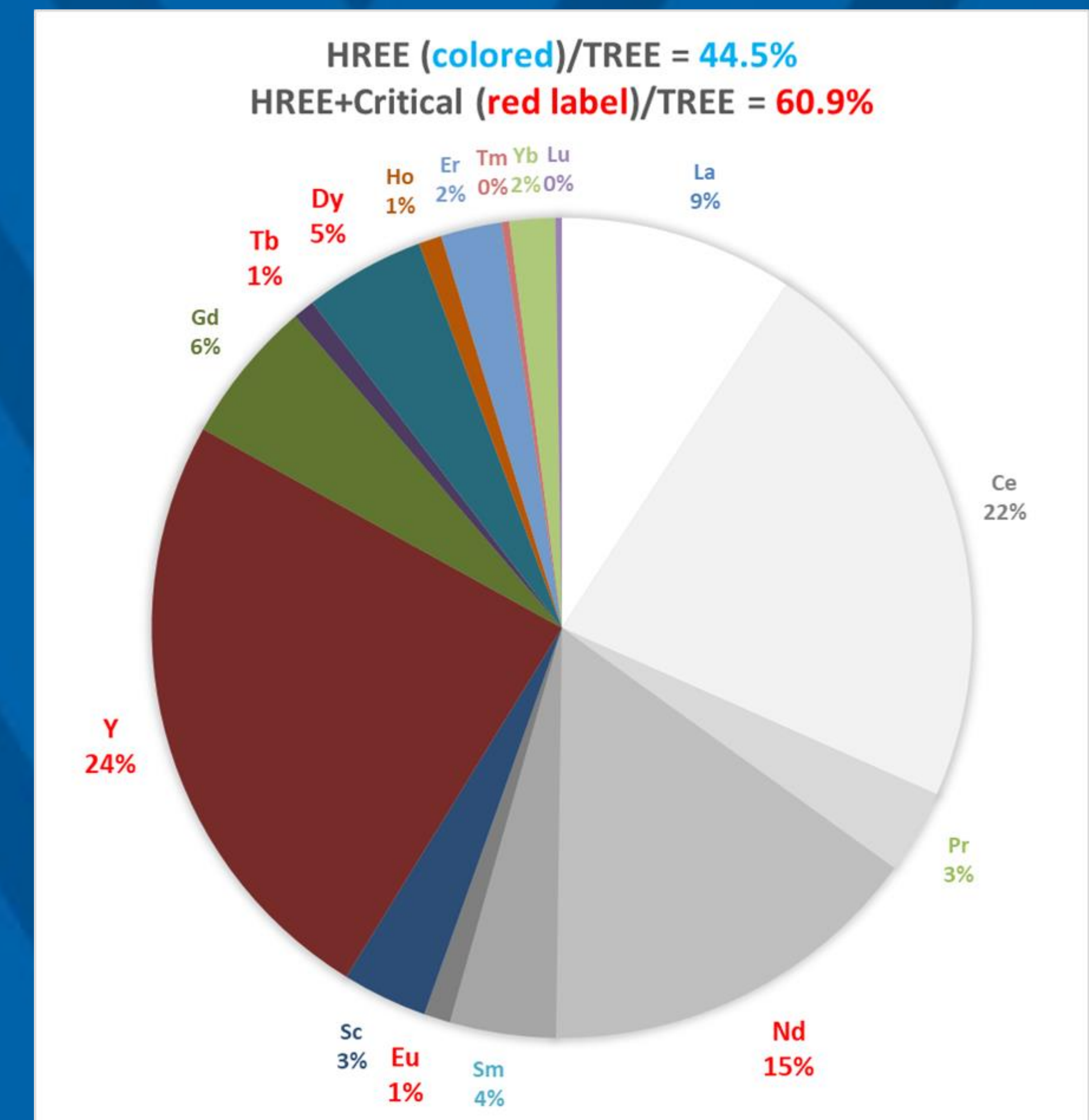
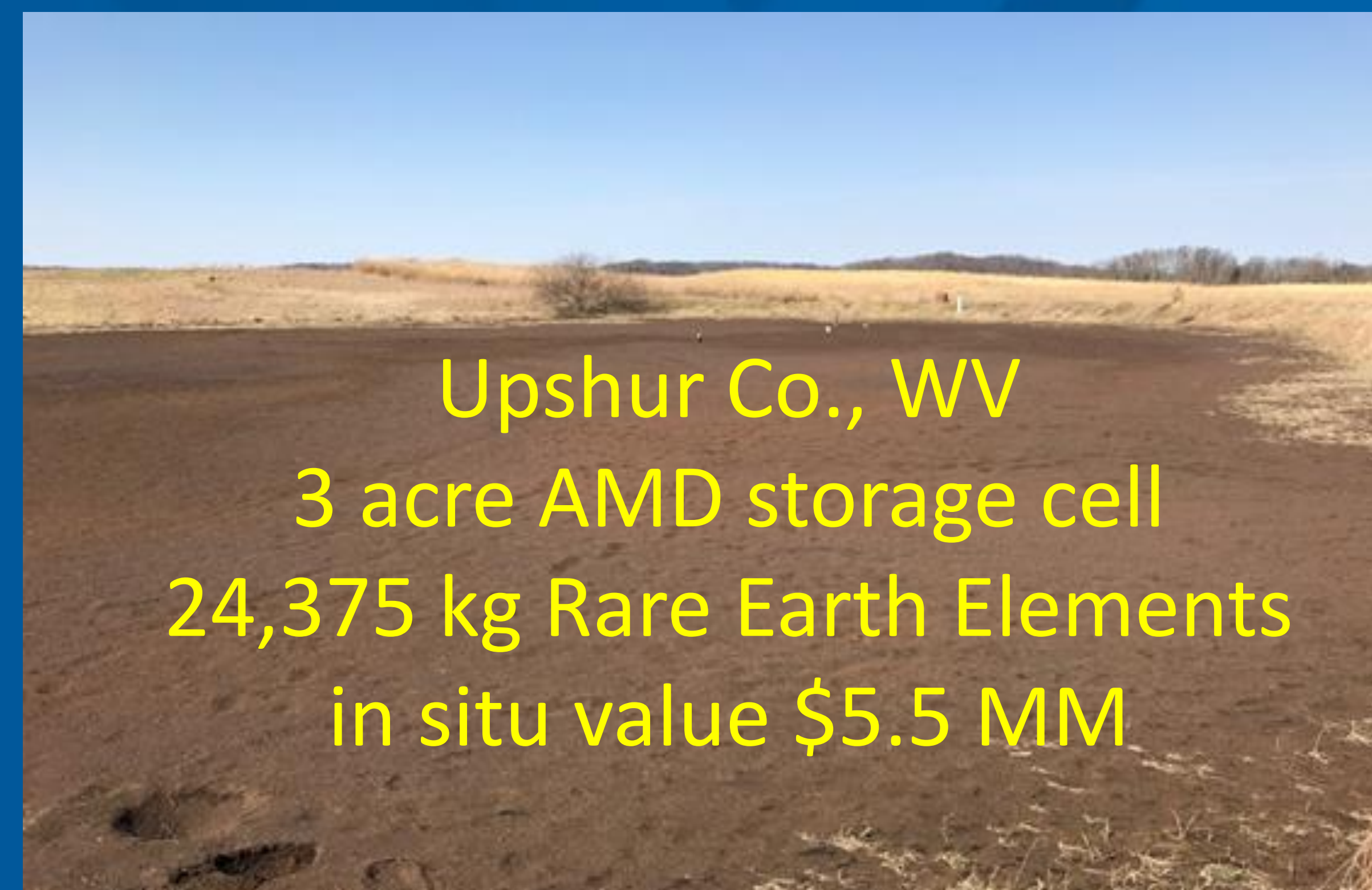
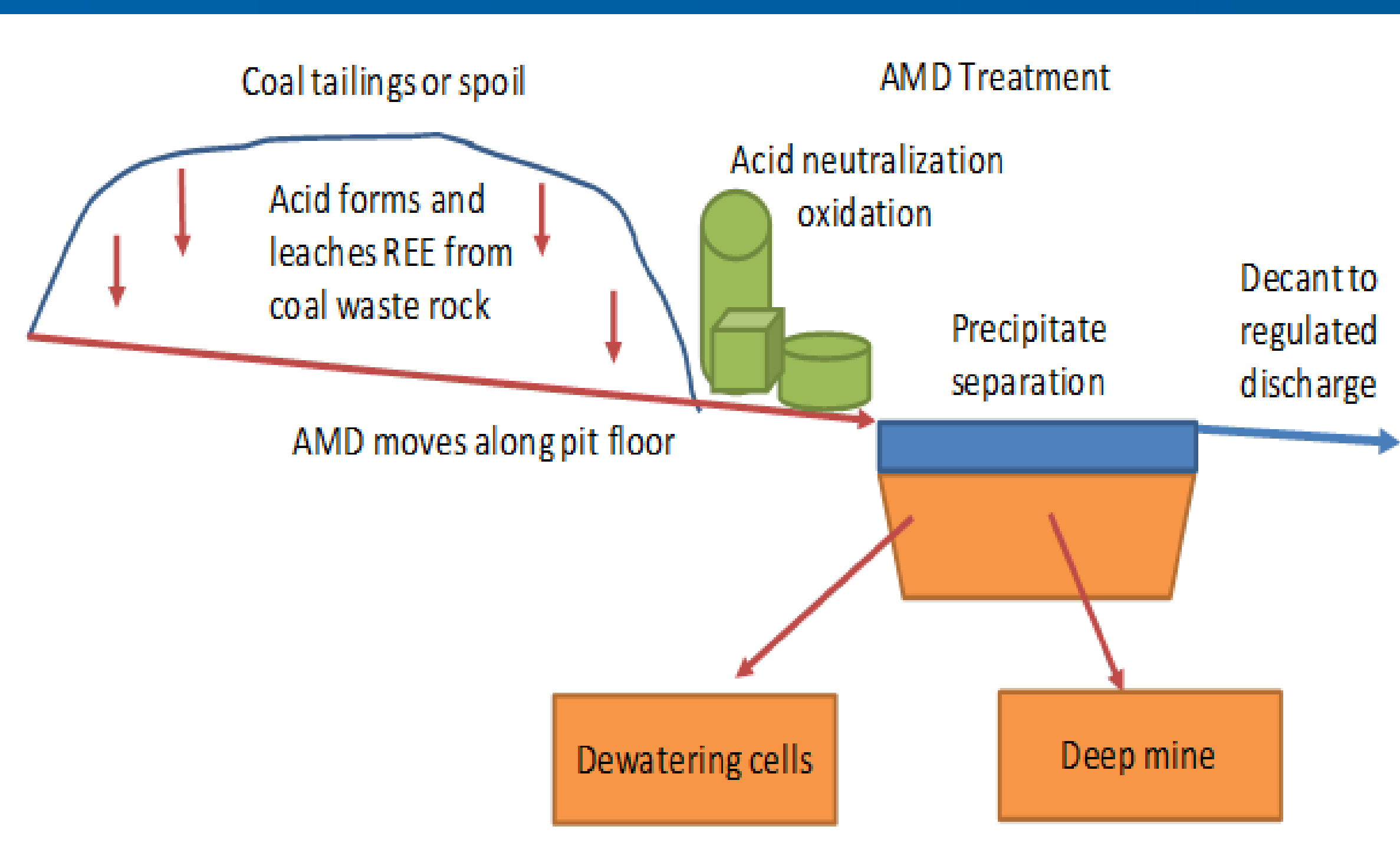


DE-FE0026444: Rare Earth Occurrence in Acid Mine Drainage Precipitates: Northern and Central Appalachia Coal Basins

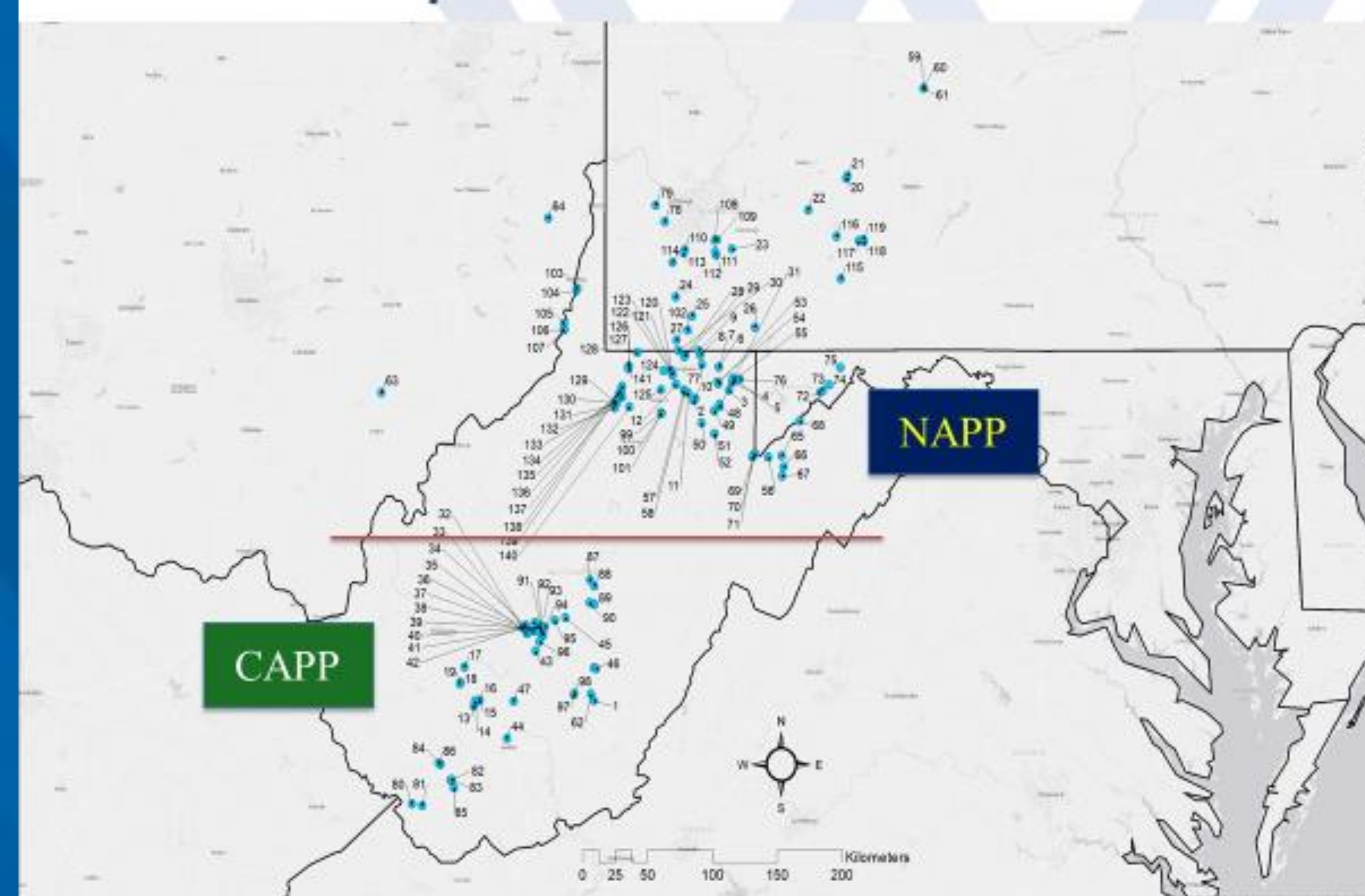
Paul Ziemkiewicz, Xingbo Liu: WVU, Aaron Noble: Virginia Tech

Objective: Estimate the mass of REE that are generated annually through AMD discharge and the mass that has been collected and stored as AMD sludge at coal mining sites in the central and northern Appalachian coal basins.

Acid mine drainage treatment



Sampled locations: 140



1. 90% + REE recovery from AMD Sludge
2. Average REE concentration= 450 g/t
3. Range 50 to 2,500 g/t
4. CAPP/NAPP nearly identical
5. High concentration of critical and heavy REE
6. 480 t REE sampled in drying cells \$107 million, in situ value
7. 631 t REE, Annual production \$142 million/year, in situ value



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