EPA United States Environmental Protection Agency

National Conference on Mining-Influenced Waters: Approaches for Characterization, Source Control and Treatment

Office of Research and Development
National Risk Management Research Laboratory, Sustainable Technology Division, Systems Analysis Branch

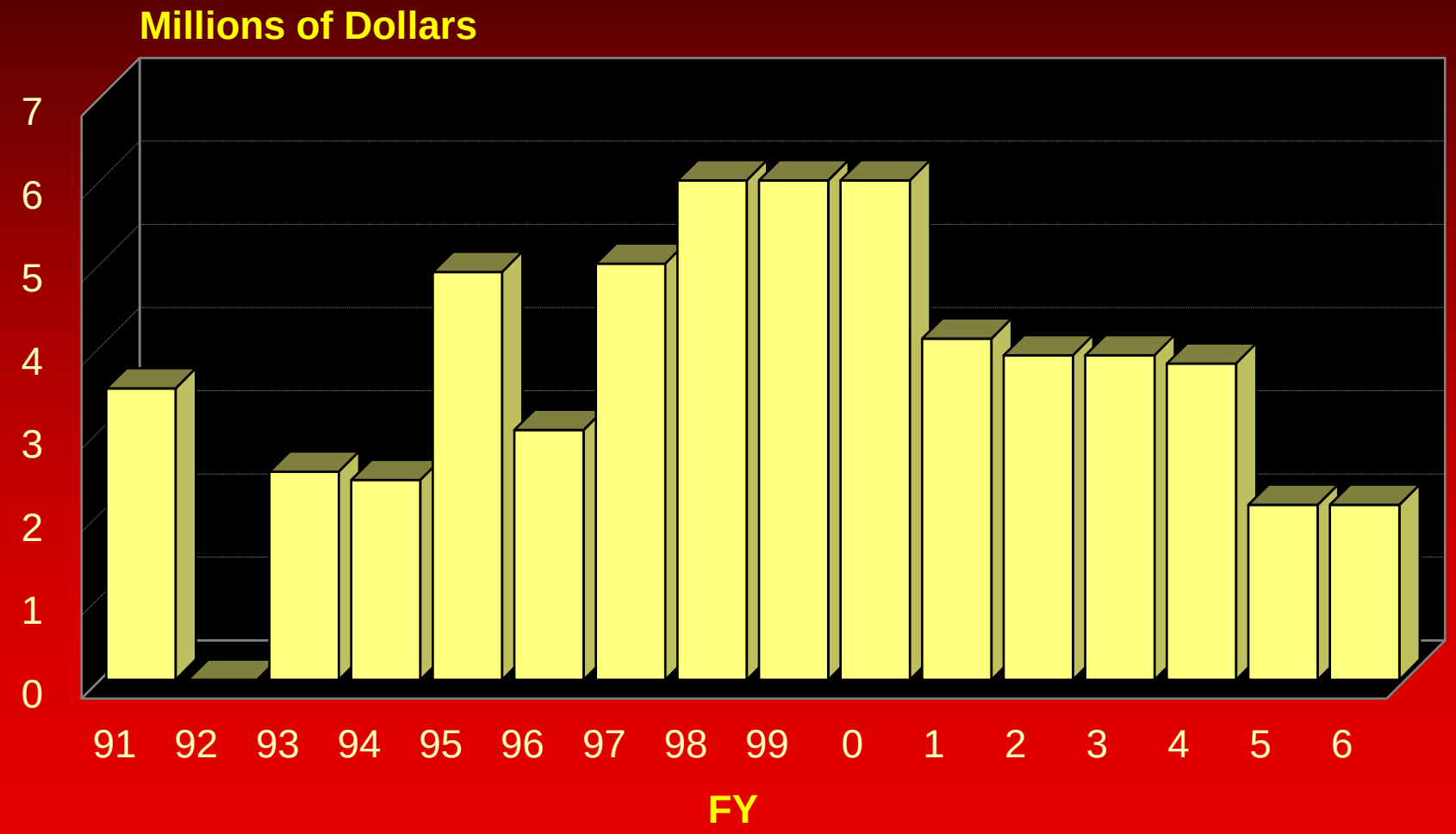
August 12-14, 2014

EPA
United States
Environmental Protection
Agency

A long time ago……..

FUNDING HISTORY

Mine Waste Technology Program



CSS Task 5.1.2
Subtask: Identifying Opportunities for the Sustainable Management of Rare Earth Element (REE) Applications

Team Members: David Meyer, Diana Bless, Mandy Radulea and Michael Gonzalez

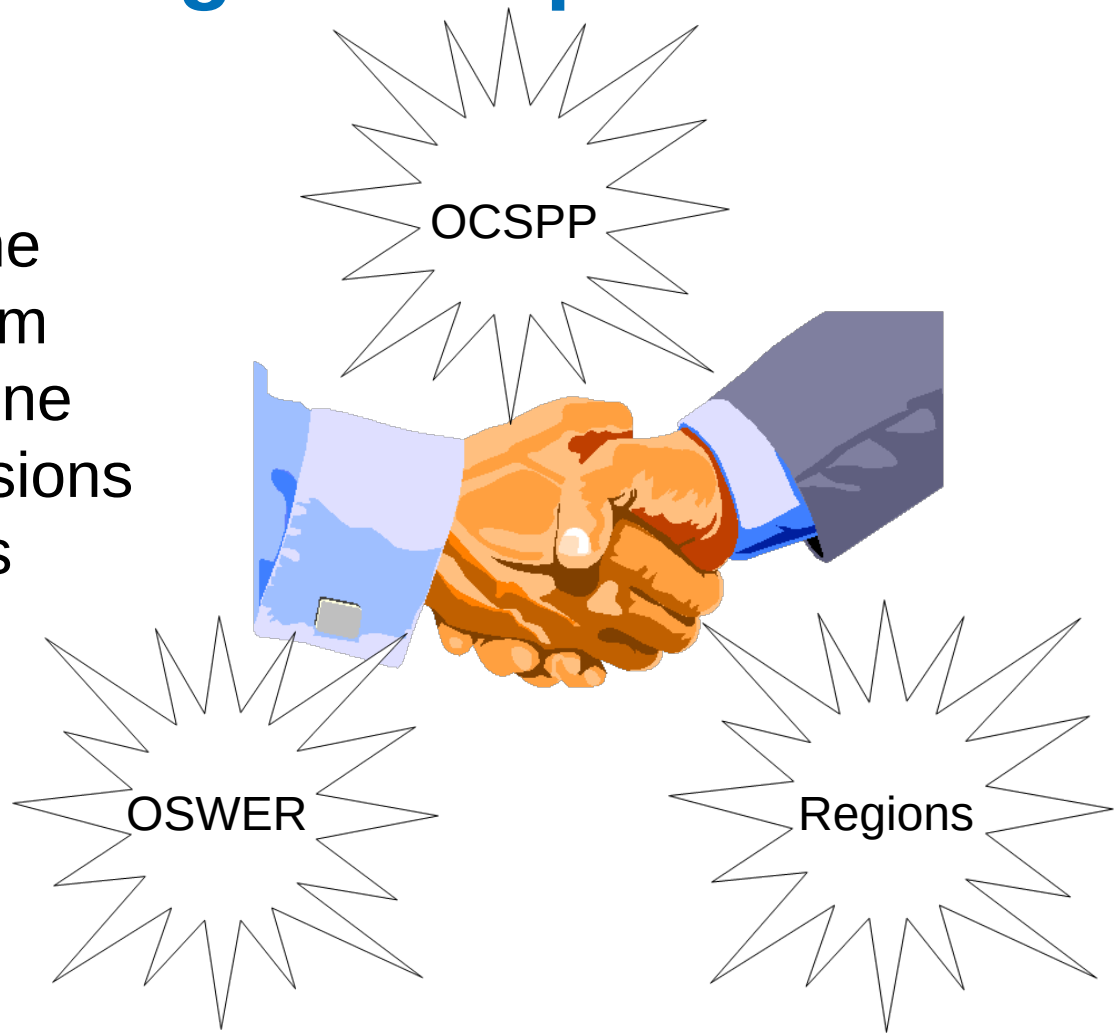
Uncovering the Global Life Cycles of the Rare Earth Elements
Adapted from Xiaoyue Du & T. E. Graedel http://www.nature.com/srep/2011/111104/srep00145/fig_tab/srep00145_F2.html

Objective

- Collaborate with EPA Regions and Program Offices to identify relevant issues associated with the life cycle of products and services related to rare earth elements (REEs) and electronics (e-waste and recycling).

How is this being accomplished?

- Engage internal stakeholders from the Regions and Program Offices through routine collaborative discussions and review of results and/or products.



List of REE Workgroup Members

NAME/Region or Program Office
Ronald Landy/Region 3 RSL
Kim Bartels/Region 8/Electronics Stewardship Coordinator
Steve Fishman/Region 7/eCycling Program Coordinator
Robert Weber/Region 7/
Niva Kramek/ OCSPP CSS Liaison
Steve Hoffman/OSWER
Christopher Newman/Region 5
Kathleen Raffaele/OSWER CSS Liason
Brenda Groskinsky/ Region 7/ RSL
Sara Willis Hartwell/OSWER/ORCR
Karen Pollard/ OSWER
John Katz/Region 9
Nicholas Anastas/Region 1
Dan Gallo/ Region 3
Holly Elwood/ OCSPP

EPA United States Environmental Protection Agency

Outcomes

- Material Flow Analysis – based on product life cycles for various industrial sectors
- Raw Materials – U.S. and Globally
- E-waste – Flows based on Consumer Electronics
- Non e-waste – Flows based on REEs & other industrial applications
- Recovery facilities – Analysis of Current Operations
- Economic Evaluation – Current trends

Next Step & Deliverables

- Literature Search on Material Flow Analysis to fill in current data & research gaps.
- REE Workgroup has picked 1-3 elements/1 application
- Final Deliverables will be:
  - a. *A report looking at the issues of e-waste, specifically life cycle assessment based on stakeholder input of a selected rare earth element application to support sustainable materials management.*
  - b. *A description of the integration of GREENSCOPE into LCA for developing globally sustainable chemical production systems with demonstrated application toward a Rare Earth Element Application.*