

## ARTICLES

# Supply Chain News Roundup: A Potential Rare Earth Elements Solution

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By Sue Doerfler



Earlier today, China announced it would begin banning the export of certain rare earth elements, which [The New York Times](#) calls “a willingness to engage in supply chain warfare.”

The minerals, which include gallium, germanium and antimony, would immediately be subject to export blockage due to their [dual-use — both military and civilian](#) — nature. They are among components used in weaponry and semiconductors.

The U.S. has long been reliant on imports, mainly from China, to satisfy its need for rare earth elements. According to the [U.S. International Trade Commission](#), in 2019, China accounted for 78 percent of the U.S.’s imports — and 63 percent of global imports — in that area.

But the U.S. wants to lessen its reliance on China, with the intent on finding sources closer to or at home.

A new stash may be on the horizon: The mineral residue from burning coal — referred to as coal combustion materials or more commonly, coal ash — is reported to contain substantial amounts of rare earth elements. According to research led by the University of Texas at Austin and reported in [International Journal of Coal Science & Technology](#), these amounts are ample to “[significantly bolster the national supply](#) without any new mining.”

According to the research, there could be as much as 11 million tons of rare earth elements in accessible coal ash in the U.S. That’s almost “eight times amount that the U.S. currently has in domestic reserves,” the research states.

considerations:

- Rare earth elements differ and are dependent on coal ash origin.
- The amount of rare earth elements that can be recovered also can depend on origin. While Appalachian Basin coal ashes contain the highest amounts of rare earth elements, only about 30 percent of those elements can be extracted, the research found. In contrast, while coal from the Powder River Basin has the lowest average value of rare earth elements, its extractability is about 70 percent.
- That so much coal ash is accessible makes it a great resource, researchers said.

“This really exemplifies the ‘trash to treasure’ mantra,” co-lead author Bridget Scanlon, a research professor at UT’s Bureau of Economic Geology at the Jackson School of Geosciences, said in a press release. “We’re basically trying to close the cycle and use waste and recover resources in the waste, while at the same time reducing environmental impacts.”

## Tracking Fatal Injuries and Mitigating Safety Risks

The transportation and warehousing industry stands out as one of the most dangerous, according to a new report from North Carolina-based DeMayo Law Group, which analyzed data from the U.S. Bureau of Labor Statistics.

With a fatal injury rate of 14.1 percent and 1,053 deaths per 100,000 workers, the industry ranked second in highest percentage of deaths, behind agriculture, forestry, fishing and hunting, which recorded an 18.6 percent rate of fatalities per 100,000 workers.

Manufacturing placed eighth out of the 10 industries surveyed; it had a fatal injury rate of 2.6 percent and 404 deaths per 100,000 workers.

The DeMayo Law Group, in a press release, said that it would like to raise awareness about workplace safety and promote measures to minimize risks within the workplace. “By identifying the most dangerous jobs, employers and regulatory bodies can develop targeted strategies to protect workers and prevent accidents,” it said.

The firm also noted that some industries naturally pose more risk than others; nevertheless, the research “serves as a reminder for individuals and organizations to prioritize thorough risk assessments, safety in the workplace, and take proactive steps to mitigate potential hazards.”

## Podcast Highlights

Institute for Supply Management®’s (ISM®) podcast, “Supply Chain — Unfiltered,” features episodes of real, raw and transparent talk on the supply management profession from those who live and breathe it. Hosted by Melanie Stern, the podcasts cover such topics as trends, disruption, economics, transportation, artificial intelligence, shipping, soft skills and more.

Episodes are available at [ismworld.org/podcast](https://www.ismworld.org/podcast) or at popular podcast platforms.

**From “Big Agriculture and the Impacts From Farm to Table”:** “You want to start improving practices. But as it is, farmers don’t have enough money to do what they’re already doing. So, now we’re asking them to do ... more with less, and the question is: Who’s going to pay for all of this?” — **Zak Zeidman**, co-founder of ReSeed

**From “Legal Perspectives for Manufacturers to Guard Against Economic Uncertainty”:** “Even if you are switching suppliers for reshoring or onshoring, that’s a transition. And you want support during the transition — maybe you want parts (shipped) or equipment transferred. So, it’s always best to work out a resolution.” — **Vanessa Miller**, partner at Foley & Lardner LLP

(Photo credit: Getty Images/Andrii Shablovskyi)



## About the Author

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As Senior Writer for *Inside Supply Management*® magazine, I cover topics, trends and issues relating to supply chain management.

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