

The Real “House of Cards”: The Dangers of Dependency on China for Rare Earth Elements



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ouse of Cards” has taken audiences by storm, not least the Washington watchers captivated by the jaundiced behind-the-scenes portrayal of how Washington really works (spoiler alert: It’s not at all like *Schoolhouse Rocks*’ “How a Bill Becomes a Law”). People shorthand the series – featuring Kevin Spacey’s southern-fried Machiavelli, House whip Frank Underwood, and Robin Wrights’ Claire, his ice-water wife – as a show steeped in “power games and political intrigue.”

Wrong. As one (disappointed) reviewer put it: “It’s a show about an isotope.”

Samarium 149, to be precise, derived from the Rare Earth Element, used in nuclear reactor fuel rods, and therefore

critical to the show's billionaire political kingmaker, Gerald McRaney's Raymond Tusk, and his cat's-paw Underwood. So learned "*House of Cards*" addicts in the first-year finale – or, for latecomers to the show like me, at the end of a long winter's night of binge watching, when the mention of Element 62 caused me to nearly fall off my couch.

But really: Samarium 149? Are we dealing with a far-fetched bit of dramatic license? Wrong again. Witness the recent Reuters story – ["U.S. waived laws to keep F-35 on track with China-made parts."](#)

This is ripped-from-the headlines stuff:

"According to Pentagon documents reviewed by Reuters, chief U.S. arms buyer Frank Kendall allowed two F-35 suppliers, Northrop Grumman Corp and Honeywell International Inc, to use Chinese magnets for the new warplane's radar system, landing gears and other hardware. Without the waivers, both companies could have faced sanctions for violating federal law and the F-35 program could have faced further delays.

"It was a pretty big deal and an unusual situation because there's a prohibition on doing defense work in China, even if it's inadvertent," said Frank Kenlon, who recently retired as a senior Pentagon procurement official and now teaches at American University. "I'd never seen this happen before."

The magnets in question – Neodymium Iron Boron or Samarium (bingo!) Cobalt, or both – are heavily dependent on specific REEs that remain the near-exclusive preserve of Chinese suppliers. Courtesy of Nicholas Pingitore – Professor of Geological Science at the University of Texas and Director of Texas Rare Earths Resources, for whom I serve as Advisory Board member – we know that each F-35 requires 910 pounds of Rare Earths.

Reuters concludes drily: "US lawmakers are worried that US weapons system may become dependent on parts made by a

potential adversary.”

And the plot thickens. Google back to last June, to a story headlined: [“Top Official Admits F-35 Stealth Fighter Secrets Stolen.”](#)

According to that report:

“Yesterday, at a subcommittee hearing attended by just half a dozen Senators, the Pentagon’s top weapons buyer made a blunt admission: The military’s most expensive program, the stealthy F-35 Joint Strike Fighter, has been hacked and the stolen data used by America’s adversaries.”

In other words, U.S. defense contractors are now buying Chinese permanent magnets with Pentagon permission – for use on a weapons platform for which the Chinese have stolen the blueprints. Someone might want to stress-test those Chinese magnets before U.S. airmen hop into those F-35 cockpits.

Will Washington see this episode of real-life drama as a reason to take a more policy-friendly view of the small-cap companies striving to bring new U.S. REE supply into production – especially Middle REEs like Samarium and the full array of Heavy Rare Earths – so that waivers for Chinese-made permanent magnets will be a thing of the past? That’s a plot-twist policy watchers and would-be Rare Earths miners would love to see.

As for *“House of Cards,”* perhaps in Season 2 billionaire Tusk will prevail on newly-minted Vice President Underwood to work a few lines into the State of the Union speech on the need for domestic Rare Earths production so as to lessen dependence on China, the better to secure his precious Samarium 149.

As for the real State of the Union three weeks from now, don’t expect the words “rare” and “earths” to appear next to each other. This is a crisis that, thus far, appears more clearly to Hollywood than to Washington. Perhaps one day soon, Life

will imitate Art.