



October Report 2025

MP Materials

Sean Murphy

Redux:

MP Materials (NYSE: MP) is a U.S.-based company that owns and operates the Mountain Pass mine in California, the only rare earth mining and processing facility in North America. MP produces critical rare earth elements, including Neodymium and Praseodymium, which are essential for manufacturing high-performance magnets used in electric vehicles, wind turbines, defense systems, and a wide range of advanced technologies.

MP Materials has been the best performing stock reported on by BayMar to date. Since we wrote about it for our March 2025 report, MP has gained over 300%. For more information on MP and to see our original thesis, read our March 2025 and July 2025 reports.

Massive Price Fluctuations

Since May of 2025 amidst the implementation of President Trump's tariffs, MP Materials has seen mass price fluctuations. Most notably, from October 1st to October 14th when MP's price rose over 50% from \$66 dollars per share to over \$100 per share. This comes on October 10th as a result of China's announcement of a new licensing system that would impose large scale export controls over rare earth materials containing as little as 0.1% of Chinese mined or refined materials. While SPX was down nearly 3% and the rest of the market saw significant losses, MP Materials saw an 8.5% gain alone with other companies within the sector.

China's New Licensing System

As I explained in past reports, China has a significant monopoly on these materials, specifically they're responsible for 70% of rare earth mining and 90% of refining. This monopoly gives China significant leverage over negotiations with other countries who need these materials for tech, AI, and military infrastructure. On October 9th, China announced additional export controls on five new rare earth materials along with a new rule that would require exports containing as little as 0.1% of it total value of Chinese-origin rare earth materials or materials mined or refined using Chinese made equipment to require a Chinese export license to ship it anywhere in the world, even two non-Chinese countries. Seeing that China has control over such a large portion of the global rare earth material supply chain, you can see how this is significantly problematic. For example, an electric vehicle that is worth \$100,000 that contains \$100 of Chinese produced dysprosium, would require this new Chinese export license. This new system was set to begin on November 1st, 2025. In response to this, Trump snapped back threatening a 100%

tariff on Chinese goods set to take effect on the same day as the new Chinese system. This exchange shook up the markets, but boosted MP and similar companies as if this system were to take shape, it would drive up demand from MP and other companies.

Meeting With China

On October 30th, Trump met with Xi Jinping for the Asia-Pacific Economic Cooperation summit in South Korea. This is the first time the two Presidents have met since January 2025. In this meeting, they discussed: tariffs, rare earth material exports, fentanyl, and tech. Leaving the meeting Trump said the meeting was “amazing” and that they had a, “truly great” encounter, rating it a “12 out of 10” on Air Force One afterward. After this meeting, it was announced that they came to an agreement on a one-year “trade truce” that deescalates immediate tensions, but does not resolve the rare earth material issue. This truce would stop the new licensing system from going into effect, but would still maintain its April system that follows a similar, but less extreme path. To simplify, the two practically hit pause on the ongoing trade war until next year, but it is unlikely that this deal will hold long term. MP rose

U.S. - Australia Deal

On October 20th, President Trump and Australian Prime Minister Anthony Albanese, signed the "United States-Australia Framework for Securing Supply in the Mining and Processing of Critical Minerals and Rare Earths" is a bilateral pact aimed at building a "friendshored" supply chain for rare earth elements and other critical minerals. This pact is a framework aimed at ongoing cooperation, with immediate funding and long-term goals like faster permitting for mines and recycling tech. The agreement creates a \$8.5 billion project pipeline over the next few years, with each side committing at least \$1 billion in the first six months. It focuses on three project categories: U.S. investments in Australian processing, joint mining ventures, and tech-sharing for recycling. The end goal is to ramp up non-Chinese capacity to 20-30% globally by 2030, per White House estimates, unlocking \$53B in Australian deposits. In reaction to this, Australian rare earth mining stocks surged the following day, up mid-to-high single digits, while MP dropped 1.9%. While this deal is great for long term distance from reliance on China for these materials, this also hurts MP as there is a looming threat of over supply, which would hurt MP's profits. But it isn't all bad. MP could later stand as the biggest winner out of this deal because MP could partner with these Aussie companies for processing, which with price floors holding, we could see a significant long-term increase in MP's revenue.

What Does This Mean for MP?:

This has been a truly historic month for the U.S. domestic rare earth material supply chain and MP remains at the center. While much remains uncertain, MP still remains in a crucial spot for the US's goal of derelying on China for these materials. MP remains scaling fast after the DoD deal which made them their biggest share holder. As for MP's future, we remain cautiously optimistic. The trade truce with China will keep MP's growth slow in the short-term, as MP's value thrives on threats of Chinese restrictions on exports of materials, but it still remains unlikely there is a deal to be made in the future with China. The US is keen on reducing dependence on these materials by any means necessary, and while the truce will keep things

calm for now, this dependence is still a problem Trump will have to solve in the near future. The Australian deal is a step in the right direction for reducing Chinese dependence, but for MP this is a threat of increased competition and supply, which keeps investors hesitant. But this deal remains a net positive for MP's future as the primary supplier for US rare earth materials as it will open up larger future investments from the US government and also the Australian government. Along with that, this deal will increase processing capacity outside of China which will greatly help MP's revenue growth. All in, the future remains bright for MP. Dependence on China for these materials is a serious threat that must be dealt with as soon as possible, and MP will be on the forefront of the emerging domestic US supply chain.

Nano Nuclear Energy

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Recap

As of the end of October 2025, NNE has been trading around about \$45 a share, from my March report when I first pointed out the stock NNE is up about 66%. On a one-year lookback, NNE is up about 141% since late October last year. Back in March, I liked NNE for its cutting edge early innovation in advanced microreactors, its research and development push, and the budget that was backed by the \$130M it raised in 2024. I also noted the aRobotics collaboration and the company's overall push to being seen in a positive light by the public, hence their Diamond sponsor of SMR Canada 2025. My original thesis has aged well, and I was eager to revisit Nano and dive deeper into the company. Also, I want to display to you why they've seen so much growth and what the future may hold.

Key events and reasons for stock growth

In short: credible program momentum, strategic portfolio moves, and growing third-party validation are all factors that are driving their growth

1. Program momentum at the University of Illinois (KRONOS) and site work starting

- NNE held a milestone ceremony at the University of Illinois on Oct 24, marking the start of geotechnical drilling and site characterization by AECOM, the kind of



tangible observable progress investors have been waiting to see. The company expects to submit the construction permit application in the first quarter of 2026.

- AECOM was formally engaged Aug 26 to support engineering, environmental and regulatory work for the KRONOS permit package, a key partnership that will help put Nano's prototypes into tangible existence.

2. Defense tailwinds

- The U.S. Air Force Direct-to-Phase II SBIR award (\$1.25M) to study deploying KRONOS MMR at Joint Base Anacostia-Bolling is a foot into defense energy resilience use cases like isolation or power outages. It's not huge revenue by itself, but it's a strong validation and a door-opener for future government contracts.

3. National lab and regulatory capacity

- NNE signed a 10-year Cooperative Research and Development Agreement with Idaho National Laboratory, granting access to development facilities, materials qualification, and licensing support, a meaningful resource for the development of KRONOS/LOKI/ZEUS.

4. Strategic portfolio clean-up & Canada option value

- The letter of intent to sell ODIN (a small low pressure coolant reactor), to Cambridge Atom Works for \$6.2M (with \$250k non-refundable upfront, \$5.95M in 2026, and future low single-digit royalties) simplifies the product line and recoups capital while keeping optionality via royalties. The focus now concentrates on gas-cooled KRONOS, LOKI, and ZEUS, enhancing development and licensing leverage.
- NNE also closed the acquisition of Global First Power from the U.S National Committee (USNC) of the International Electrotechnical Commission on October 22, handing NNE the CNSC licensing application for a KRONOS demonstration at Chalk River, Ontario. That sets up dual-track U.S./Canada licensing and demonstration.



5. Foundational capability build-out

- The Westchester (NY) testing facility retrofit, which I highlighted in my earlier report, was completed in May; it's set up for non-nuclear mechanical/thermal testing, including the ALIP subsystem that could become a standalone commercial product line. This kind of internal testbed is a real schedule and quality asset to their future endeavors.

Price Action

From March to now, I've seen Nano focus on program de-risking through AECOM on permit work, and the University of Illinois site work. I've also noticed a strategic shift and better cash management seen in the ODIN sale, which allows Nano to take a more direct approach towards accelerating the KRONOS, LOKI, and ZEUS research and development. I believe these milestones allowed investors to see past the technology and licensing risks associated with Nano, and the overall opinion has shifted from being skeptical of the results that the company will produce, to a collective feeling of excitement for what the future might hold for them. Hence why we have seen a 66% increase since March and over a 140% increase year over year in their stock price.

Risks to Follow

- **Licensing Timelines:** The University of Illinois construction permit is expected to be submitted in Q1 of 2026, and if we see this contract fall through it will cause some investor drawback.
- **Execution:** Currently NNE is running a dual partnership with US/Canada programs; however, defense studies and program management for both countries may cause Nano to encounter conflicting interests and goals, which may lead to a slowed development process.
- **Capital Needs:** As with all energy startups capital is always a pressing issue, Nano has acted with the sale of ODIN and portfolio management. On top of that they also have the \$140 million raised in 2024 to work with for the time being, which is more than sufficient for their research and development now. In the future, it's important to monitor NNE and to take note of potential changes that they see in their capital.

Bottom Line

Back in March I framed NNE as an execution driven clean energy name with unusually visible propellants such as: facility build-out, sponsorships, capital in hand, and credible partners

forming around it. Since then, we've seen contract wins, access to labs, licensing pathways, and visible site work that has strengthened my original thesis. If Nano executes their plan, the future looks bright for them and doors will open to a variety of different industries. Nano's portable nuclear reactors will be used to power AI data centers, overseas military installments, rural towns, cities, future space exploration, and anywhere that needs a substantial amount of power. The keys for NNE are KRONOS, LOKI, and ZEUS which will be Nano Nuclear Energy's seed for the future evolution of our world.

Thank You for reading and good luck.

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