



September 24, 2018

Secretary Wilbur Ross
United States Department of Commerce
1401 Constitution Avenue NW
Room 1093
Washington, DC 20230

Sent electronically via Regulations.gov and via email

Dear Secretary Ross,

These comments are submitted on behalf of the Grand Canyon Trust and the undersigned groups in response to Docket number BIS-2018-0011.

The Grand Canyon Trust is a non-profit conservation advocacy organization based in Flagstaff, Arizona. Founded in 1985 with the mission to protect and restore the Colorado Plateau—its spectacular landscapes, flowing rivers, clean air, diversity of plants and animals, and areas of beauty and solitude, the Trust has over 3,000 members.

One goal of the Grand Canyon Trust is to make sure the Colorado Plateau remains characterized by vast, open spaces with restored, healthy natural areas and habitat for all native plants and animals. Additionally, the Trust strives to ensure that human communities are able to enjoy a sustaining relationship with the natural environment for generations to come. In pursuit of these goals, the Grand Canyon Trust has worked for years to oppose irresponsible uranium mining and milling across the region, a practice that has left a toxic legacy that the region's residents still live with today.¹

In January, Canada-based uranium mining companies Energy Fuels Resources Inc. and Ur-Energy USA Inc. submitted to the Department of Commerce, a Petition for Relief Under Section 232 of the Trade Expansion Act of 1962. This petition asks Commerce to consider recommending a quota that would reserve 25 percent of the U.S. uranium market for uranium mined in the U.S. and a “Buy American” policy for U.S. government agencies that use uranium. The petition claims that these measures are necessary because Russia, Kazakhstan, Uzbekistan and China have seized “the majority” of the U.S. uranium market, pushing the U.S. into a national security crisis. The premise is that an established quota and Buy American policy will fix this alleged problem, and reduce the inherent threat to U.S. national security. While our group does not pretend to be qualified to determine what is or is not a threat to national security, we would like to bring several points to the Commerce Department's attention.

¹ One recent example: Rock, Tommy. “Coconino Voices: The Effects of Uranium Mining on Navajo Lands.” *The Arizona Daily Sun*. 20 Sept. 2018. https://azdailysun.com/opinion/columnists/coconino-voices-the-effects-of-uranium-mining-on-navajo-lands/article_a0424e67-d83f-58e2-b02f-90d6285c9f2c.html

First, we'd like to point out what we believe to be overstatements in the companies' petition. Our assertions are based on government data. Also, should Commerce decide that measures are necessary to boost domestic uranium development, we'd like to proactively share important and relevant reasons why mining in the Grand Canyon region should not be named a target priority for accomplishing that goal.

Overstatements in the 232 Petition

According to the Energy Information Administration, the countries named in the petition as posing a threat to U.S. national security have not, as the petition claims, "seized a majority of the U.S. market."² While in 2017, Russia, Kazakhstan, and Uzbekistan supplied 13.7 million pounds of uranium (32 percent of 2017 U.S. uranium demand), China did not supply any uranium to the U.S. at all and the U.S. and other world countries supplied over 29 million pounds of uranium (the remaining 68 percent of U.S. demand).³ The largest portion of that 68 percent—25 million pounds of uranium (58 percent of U.S. demand)—came from the U.S., Australia and Canada. We assume that Canadian supplies are not a cause for national security concerns, but if that were the case, it would be terribly ironic that the companies making such claims are themselves subsidiaries of Canadian corporations.

Secondly, if the goal of imposing quotas and Buy American requirements is to stabilize domestic nuclear power generation, according to the nuclear power industry itself, this goal is likely to fail. "The Market Impact of Proposed U.S. Uranium Import Quotas on the U.S. Nuclear Power Industry," a study conducted by the NorthBridge Group (an economic and strategic consulting firm serving the electricity and natural gas industries), says the analysis of costs to the power industry in the 232 petition is "deficient [...] because it relies on a data sample with historical U.S. production levels that fall well below the level that would be needed to support the proposed quota and thus sheds little light on what would happen if production were increased far beyond these levels".⁴ The study shows that actually, the nuclear power industry may not be able to afford to depend on domestic sources of uranium. The NorthBridge study states that "[w]hen utilized to estimate the cost increase of the proposed quota for U.S. nuclear power industry, [...] the costs are likely to be about \$500 to \$800 million per year in the steady state, or about \$0.65 to \$1 per MWh, but could potentially be higher in the early years of the policy."⁵ The study goes on to say:

The proposed quota would thus likely lead to the incremental retirement of additional nuclear facilities beyond those already announced. The employment impact of the retirement of a single nuclear facility likely offsets any increase in mining employment due to the proposed quota. In addition, incremental retirements due to the quota would permanently diminish demand for

² Energy Fuels, Ur-Energy. 232 Petition. Page 1.

³2017 Uranium Marketing Report. *Energy Information Administration*. May 2018. Page 21.

<https://www.eia.gov/uranium/marketing/pdf/umar2017.pdf>.

⁴<https://www.nei.org/CorporateSite/media/filefolder/resources/reports-and-briefs/northbridge-uranium-quota-201807.pdf>

⁵Page 2. <https://www.nei.org/CorporateSite/media/filefolder/resources/reports-and-briefs/northbridge-uranium-quota-201807.pdf>

uranium, increase electricity costs for consumers, decrease the resiliency of the electric system [...].⁶

Grand Canyon Region is No Place for Uranium Mines

Ultimately, if Commerce decides that domestic uranium mining is a matter of national security despite these overstatements by the mining industry and clear risks to the nuclear power industry, we want to be clear that the Grand Canyon region is not a necessary or optimal source of that uranium.

The Northern Arizona Mineral Withdrawal

In 2012, following a multi-year public process that drew nearly 300,000 public comments and broad bipartisan support within local communities, the Department of Interior issued a temporary 20-year mineral withdrawal on one million acres of public lands adjacent to Grand Canyon National Park. One of the primary reasons for this withdrawal is the scientific uncertainty that exists in the region, preventing well-informed decisions that adequately weigh both the benefits *and* the risks of uranium mining in this locally and globally significant landscape. The 20-year withdrawal was meant to pause new mining claims to provide time for the U.S. Geological Survey to conduct the necessary vast research in the region. Existing claims with valid existing rights are exempt from the withdrawal, and the Canyon Mine on the south rim is one mine that has been allowed by the U.S. Forest Service to move forward. The research is meant to provide a clearer understanding of the hydrology of the region, among other factors. This information would shine light upon where and how quickly groundwater flows from one place to another. Such information is key to estimating where any unintentional contamination could spread and what populations and uses would be impacted should contamination occur. Unfortunately, Congress has yet to provide adequate funding for this research, leaving research progress far behind where it should be six years into the withdrawal.⁷ According to USGS research staff, definitive answers may now be impossible to find by 2032.⁸

The Economics of Grand Canyon Uranium Deposits Don't Make The Region An Optimal Target

According to the Final Environmental Impact Statement (Oct. 2011), “[t]he uranium deposits within the northern Arizona breccia pipes are of higher grade than approximately 85% of the world’s known uranium deposits.”⁹ However, the grade of ore near the Grand Canyon is still well below the grade of other deposits

⁶ Page 2. <https://www.nei.org/CorporateSite/media/filefolder/resources/reports-and-briefs/northbridge-uranium-quota-201807.pdf>

⁷ U.S. Geological Survey. 15 year science plan. Updated May 2014. Page 22 shows the planned budget. USGS staff have confirmed over the telephone that Congressional funding has not come through, sometimes not at all, and at other times in far inadequate amounts. The President’s 2019 budget proposal cuts funding for the USGS Toxic Substances Hydrology Program entirely, this is the program under which the Grand Canyon withdrawal research is being conducted.

<https://az.water.usgs.gov/projects/Uranium/docs/GrandCanyonSciencePlan.pdf>

⁸ Telephone Conversation between Grand Canyon Trust Staff and AZ USGS Research Staff, March 1, 2018.

⁹ Northern Arizona Proposed Mineral Withdrawal Final Environmental Impact Statement. October 2011. Page ES-8

around the world. For example, while the Canyon Mine has “indicated resources at 0.75%”¹⁰ to 0.88%¹¹, the McArthur Mine in Canada “has enormous reserves of high grade ore at 16.5% U₃O₈ after allowance for dilution.”¹² And although Energy Fuels Resources claims that the Canyon Mine contains “the highest grade uranium being developed in the U.S.,”¹³ the Canyon Mine’s reserves still are not in the lowest forward cost category (\$0-\$30/lb) for known domestic deposits.¹⁴ The more economical deposits exist in Colorado, Nebraska, Texas and Wyoming.¹⁵ Rather, Grand Canyon deposits are within the higher forward cost categories. According to the Energy Information Administration, within Arizona, Colorado, and Utah, there are 63 million lbs of uranium in the \$50/lb cost category, and 198 million lbs in the \$100/lb cost category.¹⁶

The Grand Canyon region is also home to less than one percent of reasonably assured uranium deposits in the country. In the 232 petition, mining companies claim that Arizona has 19 million pounds of reasonably assured resources (“measured and indicated”).¹⁷ But according to our research, as far as the U.S. government is concerned, the only reasonably assured reserves in the withdrawal area are at the Canyon Mine. According to the Canyon Mine’s technical report, the mine’s reserves amount to 2.43 million pounds.¹⁸ 2.43 million pounds is just 0.29% of reasonably assured reserves of uranium in the entire U.S., which, according to the 232 petition, sit at 836 million pounds.¹⁹

While Energy Fuels owns the Canyon Mine, the company’s stake in the withdrawal area is far larger than a single mine. As of February, 2018, the BLM’s LR2000 database showed that Energy Fuels Resources owns 12 percent of the 831 active mining claims remaining within the withdrawal boundaries.²⁰ In early 2018, the company gained an even greater share in the region when Encore Energy Corp—a company that Energy Fuels owns a primary portion of its shares (19.9%)²¹—acquired²² separate claims in the region that comprise 73 percent of the mining claims still active within the withdrawal boundaries. In total, that means Energy Fuels now has a stake in at least 85 percent of the active claims in the withdrawal area. And yet, based on a comment made by Paul Goranson, Energy Fuel’s Chief Operating Officer, even Energy Fuels executives seem to agree that the Grand Canyon region should not be a top priority for uranium development. In July of 2018, in response to a question from Bloomberg News about the newly announced

https://www.grandcanyontrust.org/sites/default/files/resources/gc_FEIS_Northern_Arizona_Proposed_Withdrawal.pdf

¹⁰ <http://www.world-nuclear.org/information-library/country-profiles/countries-t-z/us-uranium-mining.aspx>

¹¹ <http://www.energyfuels.com/project/canyon-mine/>

¹² <http://www.world-nuclear.org/information-library/country-profiles/countries-a-f/canada-uranium.aspx>

¹³ <http://www.energyfuels.com/project/canyon-mine/>

¹⁴ 2017 Domestic Uranium Production Report. Energy Information Administration. May 2018. Page 19.

¹⁵ 2017 Domestic Uranium Production Report. Energy Information Administration. May 2018. Page 19.

¹⁶ <https://www.eia.gov/uranium/reserves/table1.php>

¹⁷ Energy Fuels, Ur-Energy. 232 Petition. Page 34.

¹⁸ Energy Fuels Resource, Technical Report on the Canyon Mine, Coconino County, Arizona, USA. Page 1-3.

¹⁹ “Petition for Relief Under Section 232 of the Trade Expansion Act of 1962 from Imports of Uranium Products that Threaten National Security.” Page 33.

²⁰ <https://www.grandcanyontrust.org/map-active-mining-claims-within-grand-canyon-withdrawal-area>

²¹ <http://encoreenergycorp.com/share-structure/>

²² <https://globenewswire.com/news-release/2018/03/20/1442763/0/en/enCore-Energy-Completes-Acquisition-of-Metamin-US.html>

uranium quota investigation, Goranson, referring to the Grand Canyon and Bears Ears regions, stated that “[t]here’s enough existing, permitted, licensed capacity to meet that new demand,” and “[f]rom our perspective, we don’t see a quota [on imports] creating a need to go into those areas.”²³

Re-opening the Grand Canyon region to mining does not make economic sense for companies, nor does it make economic sense for Northern Arizona communities. Without the necessary scientific understanding of the regional hydrology and other possible pathways for contamination, mining uranium from the Grand Canyon region poses too much risk to precious ecological and cultural resources. The Canyon Mine, for example, sits less than ten miles from the South Rim of Grand Canyon National Park on National Forest lands near Red Butte, a Traditional Cultural Property sacred to the Havasupai Tribe. The Havasupai reside in a remote village inside the Grand Canyon. The Tribe’s sole water supply flows from a regional aquifer that underlies the Canyon Mine and other potential mines, which could pose a huge threat to the health and wellbeing of the Tribe should contamination occur. Such resources also draw tourists and outdoor enthusiasts to the area, which serve as a primary economic driver for the state of Arizona, especially the Northern Arizona region. According to the 2017 “National Park Visitor Spending Effects” report, Grand Canyon National Park attracted approximately 6.3 million visitors, who spent \$667 million and supported 9,420 jobs in gateway communities.²⁴ These figures are incredibly significant, especially when compared to those of uranium mining operations.

For example, in 2017, the Canyon Mine employed around ten people locally, while the entire U.S. uranium production industry employed under 600 people and hasn’t employed more than 1,600 people *nationwide* in the past 24 years.²⁵ Even without the mineral withdrawal, breccia pipe uranium mining (the sort in the Grand Canyon region) is not a long-lived operation. Even if the U.S. government removed the variable of global market fluctuation, which causes mining companies to hire and then fire workers, breccia pipe mines are mined out relatively quickly, meaning any jobs they could provide would still be temporary. The Canyon Mine, for example, is expected to be mined out within 10 years of steady operation and the company estimates it would employ only 60 people during the peak period of operations.²⁶ Because of the potential risk to Grand Canyon National Park and adjacent public lands, an area that has proven to be a

²³“Uranium Producer Says It Won’t Touch Grand Canyon.” Bloomberg News. July 19, 2018. <https://news.bloombergenvironment.com/environment-and-energy/uranium-miner-energy-fuels-says-it-wont-touch-grand-canyon>. Full excerpt of text here: “Energy Fuels Inc., one of the companies seeking a national quota on uranium imports, probably won’t mine for the radioactive element in sensitive areas near the Grand Canyon and Bears Ears National Monument, a top company official told Bloomberg Environment. ‘There’s enough existing, permitted, licensed capacity to meet that new demand,’ said Paul Goranson, chief operating officer of Energy Fuels, one of the nation’s biggest uranium producers, headquartered in Lakewood, Colo.. ‘From our perspective, we don’t see a quota [on imports] creating a need to go into those areas.’ The U.S. has plenty of areas to develop uranium production, he said. ‘We don’t need to go into these culturally sensitive areas.’”

²⁴ “2017 National Park Visitor Spending Effects Economic Contributions to Local Communities, States, and the Nation.” April 2018. Page 22. https://www.nps.gov/nature/customcf/NPS_Data_Visualization/docs/NPS_2017_Visitor_Spending_Effects.pdf

²⁵ 2017 Uranium Marketing Annual Report. *Energy Information Administration*. May 2018. Page 18. <https://www.eia.gov/uranium/production/annual/pdf/dupr.pdf>

²⁶ <http://www.energyfuels.com/project/canyon-mine/>

major economic driver in Northern Arizona, it isn't appropriate to prioritize uranium mining as it could destroy the rich cultural and ecological resources that have proven to be of such high value in the region.

That the Grand Canyon region need not become a priority for uranium mining is further supported by the fact that already-mined uranium is in no short supply. Inventories are available for use by the defense and nuclear power industries, should a supply-chain become impaired. According to a study conducted by the U.S. Department of Energy in 2015, which assesses the "availability of enriched uranium in the United States for use in military applications—primarily, production of tritium for nuclear weapons and fabrication of fuel for naval nuclear propulsion reactors,"²⁷ the United States has enough mined uranium to get by until 2060. The study states, "[o]f note, new sources of fuel for naval reactors will be needed in approximately 2060 and HEU [highly enriched uranium] inventories currently used to meet non-defense national priority missions, as currently defined, may be exhausted in approximately 10-15 years."²⁸ The Union of Concerned Scientists have also reviewed this study and confirm that "[...] the United States has sufficient enriched uranium from various sources to meet these needs, with low to moderate risk, until around 2040 for tritium production and 2060 for other uses."²⁹ In addition to defense supplies, additional currently held inventories could also buy time in the event that fuel supplies for nuclear power generation are cut off. According to the Energy Information Administration, U.S. utilities currently manage an inventory of 142.7 million pounds of uranium oxide. When combined with the roughly 14 million pounds³⁰ of excess inventories managed by the U.S. government, the U.S. could complete 100 percent of its anticipated future demand³¹ for 4 years or the country's needs in excess of what the U.S. currently buys from Australia and Canada each year for more than 8 years.³² For these reasons, a rush to mine uranium from the Grand Canyon would be not just uneconomical, but entirely unnecessary. It would be premature and a huge mistake to disrupt the very resources that play a key role in allowing the state of Arizona's economy to thrive.

In conclusion, the petitioning companies have much to gain from the establishment of quotas. After all, quotas would allow the mining companies to circumvent a global market that hasn't needed them for decades. As the petition itself states, "[u]nder the 25 percent quota, prices increase \$21 per pound in 2018 and \$32 per pound in 2022...which translate to a 69 and 104 percent increase in domestic prices respectively."³³ Energy Fuels' president even told an audience at an investor conference that quotas "could

²⁷ <https://allthingsnuclear.org/elyman/no-rush-to-build-a-u-s-military-enrichment-plant>

²⁸ Page iv <http://fissilematerials.org/library/doel5b.pdf>

²⁹ <https://allthingsnuclear.org/elyman/no-rush-to-build-a-u-s-military-enrichment-plant>

³⁰ "Petition for Relief Under Section 232 of the Trade Expansion Act of 1962 from Imports of Uranium Products that Threaten National Security." Page 21.

³¹ U.S. EIA 2017 Uranium Marketing Report at 37 shows maximum estimated demand from 2018-2027. The average annual demand for that period is 38.9 million pounds U3O8 per year.

³² U.S. EIA 2017 Uranium Marketing Report at 37 shows maximum estimated demand from 2018-2027. The average annual demand for that period is 38.9 million pounds U3O8 per year. If Australia and Canada continue to supply 51 percent of U.S. demand, this leaves approximately 19 million pounds per year that the U.S. would need to provide for itself if all other supplies ceased immediately. Given current mined inventories (142.7 million lbs + 14 million lbs = 156.7 million lbs in current U.S. inventories. 156.7 million lbs/19 million lbs per year = 8.25 years).

³³ 232 Petition. Page 8.

change our business overnight.”³⁴ While it is natural that companies should want to make a profit, the companies’ potential to privately benefit is worth remembering when even the nuclear power industry, which the mining companies claim to want to protect, has itself contested the mining companies’ estimates and said the measures requested in the petition will harm the nuclear power industry. According to industry experts, it is questionable as to whether or not the power industry can afford to depend on domestic sources of uranium as the costs are likely to be exorbitant and quotas could lead to the retirement of even more nuclear reactors.

The mining companies also mis-use statistical information to give the impression that Russia, Kazakhstan, Uzbekistan, and China have “seized a majority of the U.S. market,” thus posing a threat to U.S. national security. U.S. government data shows that only some of these countries actually supplied 32 percent of the 2017 U.S. uranium demand while the U.S. and other countries supplied the *majority* (68 percent) of total domestic demand, with the largest portion being from the U.S., Australia and Canada.

Additionally, the Northern Arizona Mineral withdrawal was put in place to allow for necessary scientific studies of the region to determine potential risks and benefits associated with uranium mining. Without this valuable information, it is risky to allow mining in the area as unintentional contamination could pose irreversible harm to entire populations of people, as well as to invaluable cultural and natural resources.

Furthermore, mining in this region does not make sense economically; not for northern Arizona communities or for companies. The grade of ore near the Grand Canyon is well below the grade of other deposits in countries like Australia and Canada. Arizona’s reasonably assured reserves also do not fall within the lowest forward cost category for deposits in the United States. And the Canyon Mine’s reserves only amount to 0.29% of reasonably assured reserves of uranium in the entire U.S.; even industry executives have been on the record agreeing that the Grand Canyon region should not be a top priority for uranium development.

Regional uranium mines can only promise short-term jobs. Canyon Mine estimates that it would only employ 60 people during peak operations and would be mined out in 10 years. The entire U.S. uranium industry has not employed more than 1,600 people nationwide in the past 24 years. These figures prove that uranium mining is unable to compete with the economic benefits provided by the cultural and natural resources of the area, which draw millions of visitors to the area who spend hundreds of millions of dollars and support thousands of jobs in gateway communities. Because mining poses unknown risks to this key economic driver while offering little in return, common sense says to steer clear of encouraging mining operations in the region.

Finally, according to experts, the U.S. is not currently wanting for uranium. Overall, the country is able to meet uranium needs with low to moderate risk until 2040 for tritium production, and 2060 for other uses. And when combined with the excess inventories managed by the U.S. government, the U.S. could complete 100 percent of its anticipated future reactor fuel demand for 4 years, or, for more than 8 years if the U.S. continues to buy consistent supplies from Australia and Canada.

³⁴ <http://noble.mediasite.com/mediasite/Play/b50773278de54313bf57df435ba81a881d>. See timestamp 8:53 for the quote.

We hope that the Commerce Department will take this information into account when reviewing the Petition for Relief Under Section 232 of the Trade Expansion Act of 1962, rather than relying only upon the misleading information presented in the petition itself by those who stand to benefit most directly, and perhaps exclusively, from the measures they propose. Should Commerce still determine that domestic uranium mining is a matter of national security, we hope that Commerce sees what we, and the broad spectrum of supporters of the mineral withdrawal in Northern Arizona see: that the Grand Canyon region is not a necessary or optimal source of that uranium for the aforementioned reasons.

Should you have any questions or comments surrounding this issue, please do not hesitate to reach out directly. Thank you for your time and consideration.

Sincerely,



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