No. 157, Original

IN THE
Supreme Court of the United States

ALASKA,

Plaintiff,

v.

UNITED STATES, ET AL.,

Defendants.

ON MOTION FOR LEAVE
TO FILE BILL OF COMPLAINT

BRIEF OF NORTHERN DYNASTY MINERALS LTD. AND PEBBLE LIMITED PARTNERSHIP AS *AMICI CURIAE* IN SUPPORT OF PLAINTIFF'S MOTION FOR LEAVE TO FILE BILL OF COMPLAINT

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INTERESTS OF *AMICI CURIAE*[1]

Northern Dynasty Minerals Ltd. ("Northern Dynasty") is a publicly-traded company with the entire private interest in the Pebble deposit, through claims from the State of Alaska. This deposit, underlying remote terrain 200 miles southwest of Anchorage,[2] is estimated to contain 76 billion pounds of recoverable copper, 4.6 billion pounds of molybdenum, 6.3 million pounds of rhenium (a rare and strategically important metal), and more.

Northern Dynasty and its subsidiary Pebble Limited Partnership ("PLP") have worked for decades to develop the Pebble deposit. That work, under close regulatory oversight from Alaska, has amounted to over $1 billion, including more than $200 million for environmental and socioeconomic research to give the company, regulators, and the community a comprehensive understanding of the impacts of development at Pebble. The company worked for years with the U.S. Army Corps of Engineers ("Army Corps") to develop ways to mitigate potential impacts, while also revising the mine's design to minimize the impact while achieving a viable process for producing these minerals.

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[1] No counsel for a party authored this brief in whole or in part. No person or entity, other than *amici curiae* or their counsel, made a monetary contribution to the preparation or submission of this brief. Counsel of record for all parties received timely notice of this intended brief under Sup. Ct. R. 37.2.

[2] The two closest communities, each 20 miles away, have 100 inhabitants. The population density in the 40,000 square miles surrounding Pebble is 0.2 persons per square mile, 30 times sparser than Wyoming.

Northern Dynasty and PLP are the corporate entities directly affected by the Environmental Protection Agency's ("EPA") unprecedented decision to veto discharges and discharge permits across the entirety of the Pebble deposit and beyond. EPA's intention was as plain as its effect: to block the extraction and use of these minerals. *Amici*, the holders of the mineral rights that EPA destroyed, submit this brief to inform the Court of the major economic consequences of EPA's action, and of the need for a direct decision by this Court.

SUMMARY OF ARGUMENT

EPA purported to act under Clean Water Act section 404(c), which permits EPA to "prohibit the specification . . . of any defined area as a disposal site" or "restrict the use of any defined area . . . as a disposal site," if the disposal "will have an unacceptable adverse effect on municipal water supplies, shellfish beds and fishery areas." 33 U.S.C. 1344(c). The Pebble mine will unavoidably involve disposal of material, particularly waste rock that inevitably accompanies copper ore. To accommodate those disposals, PLP applied for a Clean Water Act permit. But EPA vetoed the issuance of any such permit for essentially any mining activities across a 309-square-mile area, with the 25-square-mile Pebble deposit in the middle. This dwarfs any "defined area" EPA has ever considered for a section 404(c) veto before now.

The economic consequences are dire. Pebble is the world's largest known undeveloped deposit of copper. The United States and the world are at the threshold of multiple industrial revolutions that depend on copper. Automotive transportation is shifting from burning liquid fuels to running on electric motors and batteries—which require massive amounts of copper.

Electricity generation is shifting from burning coal and gas to renewable generation, chiefly wind and solar. These technologies demand far more copper, per kilowatt of capacity, than traditional generation. Getting electricity to where it is needed, and getting it to electric vehicles, requires many miles of new electric lines, and copious quantities of copper.

These changes will necessitate new mines. Recycling copper and extracting what remains from existing mines will not be enough. Nearly two-thirds of all copper produced in the last 100 years is still in use. The United States in particular needs new mines. It already imports nearly half its copper, and a significant portion of the world's new mining capacity is committed to sending concentrate to China, the country's strategic economic rival, for smelting and refining. Pebble offers the brightest prospect for addressing these needs. Its scale represents, on its own, nearly 4% of global copper reserves. The mine would also produce other valuable metals such as molybdenum and rhenium.

EPA wiped this promise off the map and blocked extraction of the Pebble metals. It did so heedless of the jobs denied to Alaskans, the financial loss to Alaska, and the serious harm to the wider economy from being denied this major source of a material crucial to the new energy economy. EPA's veto not only blatantly disregards the federal government's undertakings to Alaska. It is a critical policy choice, buried under a comparatively modest provision in the Clean Water Act. Northern Dynasty and its historical partners have collectively invested over $1 billion to develop a comprehensive plan to bring the Pebble copper to market. For EPA to destroy what the State and the company worked so hard to create will not only deprive the United States of one of its largest potential

copper sources but will also discourage and impede investment in other potential mines.

Alaska presents serious and substantial arguments that EPA's action was unlawful. The consequences of that unlawful decision call out for this Court's original jurisdiction.

ARGUMENT

I. THE UNITED STATES NEEDS MORE COPPER.

The Pebble deposit contains vast amounts of important metal ores, including copper, molybdenum, gold, silver, and rhenium. These metals are vital to the modern economy, and the need for copper especially will grow significantly as the United States and the world transition their economies to emit less carbon dioxide.

A. Copper is the lifeblood of electricity.

Electricity needs electrical conductors, *i.e.* metals. Yet a conductor's electrical resistance generates losses; those losses are wasteful both directly (the lost energy is unavailable for use) and indirectly (the lost energy generates heat that takes further cost and energy to manage). The demand for copper in electrical systems is inexorable because its resistivity is lower than any other metal besides silver (which is much more scarce and expensive).[3] "Electricity networks need a huge amount of copper . . ., with copper being a cornerstone for all electricity-related technologies."[4]

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[3] David R. Lide, ed., *CRC Handbook of Chemistry and Physics*, 12-45 (CRC Press LLC, 82d ed. 2001-2002).

[4] Int'l Energy Agency, The Role of Critical Minerals in Clean Energy Transitions 5 (last rev. Mar. 2022) (IEA Report).

Copper demand has accelerated in recent decades, so that even as worldwide production has doubled, copper prices have more than tripled.[5] U.S. production, meanwhile, has declined by 40% over that time.[6]

That growth is only a small taste of what is to come. The United States and the world are beginning two major transformations, both reducing carbon dioxide emissions, by shifting emissions-intensive sectors towards electricity and by shifting electricity generation towards low-emission sources. Both shifts will force exponential growth in demand for copper.

Road transportation "accounts for over 15% of global energy-related emissions."[7] Light-duty passenger vehicles have historically represented about 40% of U.S. petroleum demand.[8] Unsurprisingly, markets are shifting towards electric vehicles. Sales of electric vehicles jumped one hundredfold from 2012 to 2022,

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[5] U.S. Geological Surv., Nat'l Minerals Info. Ctr., *Copper—Historical Statistics, Data Series 140* (Sept. 23, 2022), https://www.usgs.gov/media/files/copper-historical-statistics-data-series-140 (production volumes); Fed. Resrv. Bank of St. Louis, *Global Price of Copper* (Aug. 29, 2023), https://fred.stlouisfed.org/series/PCOPPUSDM (copper prices). The copper price increased by 50% more than general inflation over the same period. *See* Fed. Resrv. Bank of Minneapolis, *Consumer Price Index 1913-* (last visited Sept. 25, 2023), https://www.minneapolisfed.org/about-us/monetary-policy/inflation-calculator/consumer-price-index-1913- (historical inflation data).

[6] U.S. Geological Surv., Nat'l Minerals Info. Ctr., *Copper—Historical Statistics, Data Series 140* (Sept. 23, 2022), https://www.usgs.gov/media/files/copper-historical-statistics-data-series-140.

[7] Int'l Energy Agency, *Electric Vehicles* (July 11, 2023), https://www.iea.org/energy-system/transport/electric-vehicles.

[8] Electrification Coal., Electrification Roadmap 12 (Nov. 2009).

and there are now more electric vehicles sold worldwide, annually, than the total of cars sold in Europe annually.[9] That growth will continue to accelerate, as the United States and others adopt policies to encourage the shift.[10] In the past year, electric vehicle and battery manufacturers announced more than $52 billion in investments in the North American supply chain for electric vehicles.[11] Even assuming no further policies to support electrification, by 2030 electric vehicles will likely constitute 30% of annual sales and over 10% of cars on the road.[12] That will include 26 million electric vehicles in the United States.[13]

Electric vehicles require large amounts of copper. Their motors contain significant amounts of copper wire, and copper conductors distribute the energy around a vehicle, from charging port to battery to motors. All told, an electric car contains around 180 pounds of copper—10 times more than a conventional passenger car.[14]

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[9] Int'l Energy Agency, Global EV Outlook 2023 14 (2023).

[10] Congress has enacted multiple programs to encourage purchases and sales of electric vehicles. 26 U.S.C. 45W; 26 U.S.C. 25E; Inflation Reduction Act of 2022, Pub. L. No. 117-169, § 50143, 136 Stat. 2044 (2022); Infrastructure Investment and Jobs Act, Pub. L. No. 117-58, 135 Stat. 429 (2021).

[11] Int'l Energy Agency, Global EV Outlook 2023 21 (2023).

[12] *Id.* at 109.

[13] Edison Elec. Inst., Electric Vehicle Sales and the Charging Infrastructure Required Through 2030 1 (June 2022).

[14] Copper Dev. Ass'n Inc., Copper Drives Electric Vehicles 2 (last visited Sept. 25, 2023), https://www.copper.org/publications/pub_list/pdf/A6191-ElectricVehicles-Factsheet.pdf.

Charging stations needed to "refuel" electric vehicles also require copper. The electricity industry forecasts drivers will need nearly 13 million charging ports in the United States by 2030.[15] Charging infrastructure demands yet more copper, not just for chargers but also for the electric lines to distribute power at high currents to the locations where drivers charge their cars. The electrical grid "represents close to 20% of current copper demand";[16] and over the coming decade, copper demand for charging infrastructure is expected to grow by 250%.[17]

Meanwhile, electricity generation is shifting from fossil-fuel-burning power plants to renewable generation such as solar panels and wind turbines. These technologies have fundamentally different copper needs. Instead of having massive turbines turning generators concentrated in a few buildings, they gather electricity produced over expansive areas. A wind farm has towers capturing wind over many acres. A solar photovoltaic plant has solar cells receiving sunlight over a wide area, typically 5 to 10 acres for 1 megawatt of nameplate capacity.[18] Gathering

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[15] Edison Elec. Inst., Electric Vehicle Sales and the Charging Infrastructure Required Through 2030 1 (June 2022).

[16] IHS Markit, The Future of Copper: Will the Looming Supply Gap Short-Circuit the Energy Transition? 30 (July 2022), https://www.spglobal.com/marketintelligence/en/mi/info/0722/futureofcopper.html (Future of Copper).

[17] Wood Mackenzie, *Copper: Powering Up the Electric Vehicle* (Aug. 13, 2019), https://www.woodmac.com/news/opinion/copper-powering-up-the-electric-vehicle/.

[18] Sean Ong et al., Land-Use Requirements for Solar Power Plants in the United States, NREL Technical Report No. NREL/TP-6A20-56290 (June 2013). A 1-megawatt conventional plant can power 400 to 800 homes. The actual production from

energy from these dispersed inputs requires copper. Solar photovoltaic generation needs about 2.3 tonnes for each megawatt of capacity,[19] and wind farms about 1.5 tonnes.[20] Thus, renewable generation sources require two to five times more copper, for a given amount of capacity, than traditional power plants.[21]

Renewable sources also differ in that the electricity must be generated where the resource is available. Instead of building power plants in convenient places for transmitting electricity to consumers, the electricity industry must build wind farms where the wind is appropriate and solar panels where the solar irradiation is best.[22] Delivering that energy to population centers requires substantial new transmission lines. Consequently, in coming decades the United States will be building transmission lines equivalent to at least one third of the total transmission currently in existence.[23] Transmission lines also require copper—

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a 1-megawatt solar plant depends on the sunlight received and other factors.

[19] A tonne is a metric ton, 1,000 kilograms.

[20] Future of Copper 34. This figure is for onshore wind farms. Offshore wind farms require nearly four times as much copper per megawatt. *Id.*

[21] *Id*. at 33.

[22] *See* U.S. Dep't of Energy, Office of Policy, Queued Up . . . But in Need of Transmission 3 (Apr. 2022), https://www.energy.gov/media/272179 (Queued Up).

[23] Wesley Cole & J. Vincent Carag, Nat'l Renewable Energy Laboratory, 2021 Standard Scenarios Report: A U.S. Electricity Sector Outlook, NREL Technical Report No. NREL/TP-6A40-80641 13 (Nov. 2021).

between 60 and 250 (for high and low voltage, respectively) kilograms of copper per megawatt-kilometer.[24]

Given all the ways copper is critical for the production, distribution, and consumption of electricity, copper demand will skyrocket in coming decades. "The expansion of electricity networks means that copper demand for power lines more than doubles" by 2040.[25] Even before the U.S. Inflation Reduction Act, the International Energy Agency forecasted that overall copper demand will increase by at least 70%, based on existing plans already announced around the world.[26] The Inflation Reduction Act will increase demand even further,[27] and additional policy changes to reduce carbon dioxide emissions even more so.[28] The U.S. Department of Energy agrees: In the most conservative scenario in which existing markets continue business as usual, demand for copper will grow from about 25 million tonnes to 37 million tonnes per year by 2035, and with increased investment in electrification and renewables the demand will double to around 50 million tonnes.[29]

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[24] Future of Copper 33.

[25] IEA Report 8.

[26] *Id.* at 47.

[27] Daniel Yergin *et al.*, Inflation Reduction Act: Impact on North America Metals and Minerals Market 11 (Aug. 2023), https://cdn.ihsmarkit.com/www/prot/pdf/0823/Impact-IRA-Metals-Minerals-Report-FINAL-August2023.pdf (IRA Impact).

[28] IEA Report 47; *see also* Dolf Gielen, Critical Materials for the Energy Transition, Int'l Renewable Energy Agency Technical Paper 5/2021 15 (2021).

[29] U.S. Dep't of Energy, Critical Materials Assessment 77 (July 2023) (DOE Assessment).

These increases are not speculative. In the United States, by 2021 there were electricity generation projects underway with more than 930 gigawatts of renewable (and nuclear) capacity, and more than 420 gigawatts of energy storage.[30] Those projects represent predictable demand for copper in the generation plants, which will need electrical transmission. More than 20 countries have policies to achieve either 100% electric vehicles on-road or in sales by 2050, and China has a target for 20% electric vehicle sales by 2025.[31] Major automakers, including General Motors and Volvo, plan to stop making conventional combustion vehicles by the mid-2030s.[32] Thus, while market forces driving the increased demand for copper may accelerate if governments adopt more policies in these directions, the basic dynamic is already in place.

B. The United States needs additional domestic copper supplies.

The world, and the United States, will need a significant expansion of mining. Worldwide copper production was 22 million tonnes last year, not nearly enough to meet coming needs.[33] Existing mines and those under construction will satisfy only 80% of copper demand by 2030—much less the growth for years after that.[34] Recycling will not be enough, because

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[30] Queued Up 1.

[31] IEA Report 85.

[32] *Id.* at 86 (citing Peter Campbell & Claire Bushey, *GM Aims to End Petrol and Diesel Sales by 2035*, Financial Times (Jan. 28, 2021), https://www.ft.com/content/ea49d8cc-0e40-4dcd-ab60-0decc7146f5a).

[33] U.S. Geological Surv., Mineral Commodity Summaries 62 (2023) (Commodity Summaries).

[34] IEA Report 11.

"[t]he amount of copper required between 2022 and 2050 is more than all the copper consumed in the world between 1900 and 2021."[35]

Moreover, copper grades at existing mines and most of the undeveloped known deposits are declining, exacerbating the need for new mines to meet the increasing demand for copper. Chile's Escondida mine, the largest in the world today, may already have peaked, and is forecasted to produce at least 5% less in 2025 than it does today due in part to declining grades.[36] Several new mines are in development or near production worldwide, but "[b]eyond the near term, few projects are planned to start operations in the late 2020s, while output from existing mines is expected to contract further. Meeting rising demand in the longer term would require continued new project development."[37]

Record low stockpile inventories worldwide have led to sustained higher copper prices today, and prices are expected to increase by as much as 83% over the next two years. This trend will only worsen as inventories are depleted and the world experiences a prolonged copper supply deficit.

This is a challenge of mammoth scale. Not even new mines will be enough; the world would need three new mines, each the size of Escondida, every year for decades to come.[38] If the looming demand for copper is to be met, the world needs to pursue every avenue for increasing supply: increased recycling of copper,

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[35] Future of Copper 46.

[36] IEA Report 136.

[37] *Id.*

[38] Future of Copper 46.

expanding production from existing mines, and new projects (such as Pebble) to develop untapped resources.

The United States in particular needs new mines. The United States currently imports 41% of its copper.[39] And its copper needs will double in the next decade, just as the rest of the world's demand rises.[40] By 2035, this country will be importing 67% or more of its consumable copper.[41] Much of that copper will come from China. Although mines in Chile generate 24% of the world's mining production, much of that raw copper goes to China for refining; and China is responsible for 42% of the world's refined copper.[42] China's hold over copper markets will increase. A new mine in Congo is expected to be the world's second largest (after Chile's declining Escondida mine mentioned above), and its dominant shareholders are owned by Chinese governmental entities.[43]

For reasons such as these, the U.S. Department of Energy recently identified copper as a "near-critical"

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[39] Commodity Summaries 62.

[40] IRA Impact 70.

[41] Future of Copper 13.

[42] Commodity Summaries 63; *see also* Future of Copper 12 (assessing China's position in world copper markets).

[43] Peter Koven, *Barrick Gold Corp, Ivanhoe Mines Ltd Sell Stakes to China's Zijin in Papua New Guinea, Congo Mines*, Financial Post (May 26, 2015), https://financialpost.com/commodities/mining/barrick-gold-corp-sells-50-stake-in-papua-new-guinea-mine-to-china-in-bid-to-forge-closer-ties (reporting sale of a 50% share in the Congo mine to Zijin Mining Group); Resource World, *China's CITIC Ups Ivanhoe Stake to 29.9%* (2019), https://resourceworld.com/chinas-citic-ups-ivanhoe-stake-to-29-9/ (reporting state-owned CITIC Metal as the largest shareholder in the company that owns the other 50% of the mine).

material for the 2025-2035 timeframe, given the high importance of copper for energy-related applications and the substantial supply risks.[44]

The world's current known reserves stand at 890 million tonnes of contained copper (not all of which is recoverable), among which the United States holds 44 million tonnes.[45] At the demand rates discussed above, those worldwide reserves could supply the world's copper needs only through 2040.

II. THE PEBBLE DEPOSIT IS A CRITICAL RESOURCE THAT CAN RESPONSIBLY SUPPLY KEY METALS.

As challenging as it is to comprehend the scale of the looming copper problem, it is hard to overstate Pebble's potential contribution towards addressing it. Pebble is the world's largest known undeveloped copper deposit.[46] The 34.5 million tonnes of recoverable copper at Pebble mine would represent nearly 4% of **current** world reserves, and would be a major addition to U.S. reserves. Pebble's copper deposits also represent over 1% of the copper **ever** produced or discovered worldwide to date.[47] Mining at Pebble cannot solve the copper supply problem on its own, but the situation will be more dire without Pebble.

Beyond copper, Pebble also contains massive quantities of molybdenum and rhenium (as well as

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[44] DOE Assessment 23, 106.

[45] Commodity Summaries 63.

[46] *Ranked: World's Biggest Copper Projects – 2023*, Mining.com (Jan. 30, 2023, 9:17 AM), https://www.mining.com/featured-article/ranked-worlds-biggest-copper-projects-2023/.

[47] U.S. Geological Surv., *How Much Copper Has Been Found in the World?* (last visited Sept. 25, 2023), https://www.usgs.gov/faqs/how-much-copper-has-been-found-world.

gold and silver). Molybdenum is a key component of advanced steel alloys used in electricity generation equipment such as wind turbines, pipelines, and more; there are no readily available substitutes.[48] Rhenium is an extremely rare element used primarily in high-temperature turbine engines.[49] The U.S. Geological Survey has assessed that rhenium is close to being a critical resource, due to its irreplaceable economic value and the risk of supply disruptions.[50] The Pebble deposit contains 2.8 million kilograms of recoverable rhenium, more than all known world reserves.[51]

The geological resource is stunning and unparalleled. Its size is what makes mining at Pebble viable despite the remote location. It is also at the headwaters of two streams that ultimately feed, 220 miles downriver, into Bristol Bay, an important salmon habitat and fishery. The copper deposit cannot, of course, be relocated. Humans use and rely on minerals, but we do not get to choose where nature places them.

Given the location and circumstances of the Pebble deposit, Northern Dynasty and its historical partners spent decades and over a billion dollars to develop a plan to access the resources responsibly. The consistent aim has been to produce the metals in a

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[48] Commodity Summaries 121.

[49] *Id.* at 144.

[50] Nedal T. Nassar & Steven M. Mortier, Methodology and Technical Input for the 2021 Review and Revision of the U.S. Critical Minerals List, U.S. Geological Surv. Open-File Report No. 2021-1045 14 (2021).

[51] Commodity Summaries 121 (reporting world reserves of 2.2 million kilograms).

way that the region, the State, and the nation can benefit from both the salmon fishery and the minerals.

After acquiring the mineral rights in 2001, the company began studying environmental conditions in the area. That project involved more than 40 independent research contractors with more than 100 scientific experts. Eventually, in 2011, the collective consultants and scientists produced a mammoth environmental baseline document, roughly 20,000 pages long, that comprehensively surveys the physical, biological, and cultural conditions at and around the Pebble deposit and Bristol Bay during the years 2004 to 2008. PLP made the baseline document publicly available in 2011.[52] This effort alone cost over $150 million.[53]

PLP then developed a comprehensive plan for the construction and operation of the mine, water management, storage of waste materials, eventual reclamation—and, from the outset, avoidance and minimalization where possible and mitigation where necessary of environmental impacts. In addition to the standard features of a mine development, PLP focused specifically on waste materials storage and water management. Pebble, like most mines, would produce waste rock and tailings. PLP carefully assessed the volumes and characteristics of anticipated wastes, and their potential for downstream impacts, and developed a management approach superior to typical mining operations. The mine would use tailings dams

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[52] The Pebble Partnership, *Environmental Baseline Document*, https://pebbleresearch.com/download/.

[53] Letter from John Shively, CEO, Pebble Partnership, to Dennis McLerran, Regional Administrator, EPA Region 10 (Oct. 21, 2011).

(commonplace in mining[54]), but designed them with a safety factor well beyond industry standard.[55] The main embankment was designed as flowthrough to minimize water containment, and reactive materials would be in a separate lined facility for eventual transfer back to the mine pit. In addition, PLP planned two large-scale water treatment plants to ensure that water discharged from the facility would meet the State's criteria to provide quality salmon habitat.

Following years of pre-permitting engagement with multiple regulatory agencies—including EPA—and community stakeholders, PLP significantly scaled down the planned mine and revised the design to further reduce environmental impacts. In these redesigns, PLP managed to reduce the overall footprint of the mine, and to completely avoid having major mine site facilities in one of the two watersheds touched by the deposit.

By 2017, after a decade and a half of preparation, the company applied to the Army Corps for a Clean Water Act permit for development of the project. PLP cooperated with an extensive National Environmental Policy Act analysis, a project greatly facilitated by the company's extensive baseline analysis. PLP engaged in multiple rounds of negotiation and revision of its plans. For example, the company developed five additional mitigation plans, finally resolving on improving

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[54] *See* IEA Report 214-22, for a discussion of the environmental impacts of mining worldwide.

[55] *See* Alaska Dep't of Nat. Resources, Div. of Mining, Land, and Water, *Pebble Project* (last visited Sept. 25, 2023), https://dnr.alaska.gov/mlw/mining/large-mines/pebble/ (view "Water Right Applications" to review applications for approval to construct tailings impoundments).

wastewater treatment facilities at communities around Bristol Bay, thereby enhancing the water quality in the area; rehabilitating streams that other, unrelated projects had damaged; and removing other parties' debris from shorelines to restore marine habitat in a nearby bay.[56]

While the Pebble deposit is, unavoidably, located at the headwaters of two streams that ultimately drain into Alaska's Bristol Bay, PLP worked diligently and thoughtfully for years to develop a plan that provides the immense benefit of the Pebble copper and other minerals while reducing and mitigating the environmental consequences of doing so.

The Pebble project was also well-poised to strengthen the communities around the mine. The project was expected to create over 6,000 jobs in Alaska (directly and indirectly, with jobs at the mine earning over $80,000 average annual salary) during the construction phase, and 4,000 during operations.[57] It would have generated about $80 million to $175 million each year in royalties for the State of Alaska, plus approximately $50 million to $150 million in state corporate income taxes.[58] PLP also undertook to share profits through a "Pebble Performance Dividend" paid to residents in the nearby boroughs, which

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[56] *See generally* Pebble Ltd. P'ship, Request for Appeal of Permit Denial, Permit Application No. POA-2017-00271, 7 (U.S. Army Corps of Eng'rs Jan. 19, 2021).

[57] IHS Markit, Economic Contribution Assessment of the Proposed Pebble Project to the U.S. National and State Economies 23 (Feb. 2022).

[58] *Id.* at 19-20.

was forecasted to provide $2,100 to $7,700 a year to each individual resident.[59]

III. EPA'S UNPRECEDENTED SECTION 404(C) VETO PLACES THE PEBBLE RESOURCES OFF LIMITS.

Northern Dynasty and PLP worked diligently for years to develop their plans for mining the Pebble deposit and delivering the products to the market. The company has invested more than $1 billion to develop the country's premier copper resource. It worked closely with the State of Alaska to ensure the State's interests and concerns for the conservation and preservation of its environment were addressed. PLP and the State were poised to assure that both the Bristol Bay fisheries and the Pebble project can coexist, to the benefit of all. PLP has a decades-long record of responsible operations in the region, and good relations with the communities near the project site. PLP was also proceeding through a rigorous process for a Clean Water Act permit from the Army Corps. (A regional office denied the permit application in late 2020, but the agency's headquarters has since remanded that decision for reconsideration of multiple crucial errors.[60])

In January 2023, EPA shut down all possibility of extracting minerals from the Pebble deposit. EPA prohibited the issuance of Clean Water Act permits for discharges within the Pebble project footprint, for any project that would have any impact "comparable"

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[59] *Id.* at 17.

[60] Letter from David S. Hobbie, Chief, U.S. EPA Regional Regulatory Division Pebble Partnership, to James Gueg, Pebble Limited Partnership (Nov. 25, 2020); Administrative Appeal Decision, Clean Water Act, Pebble Limited Partnership, POA-2017-00271 (U.S. Army Corps of Eng'rs Apr. 24, 2023).

to the Pebble mine; and prohibited actual discharges into the waters of the United States, within a 309-square-mile area, for any project with an impact "comparable" to the Pebble mine.[61]

These bans, together or separately, make it impossible to extract minerals from the Pebble deposit. Although EPA's determination purports to leave open the possibility that other mine plans could be proposed that are not subject to the bans,[62] that hypothesis is speculative fiction given the character of EPA's determination. Each of EPA's bans applies for any mine deemed to have "the same or greater levels of loss or streamflow changes."[63] And EPA made clear that this assessment is made not in the aggregate, in other words that the question is not whether a given mine has a total impact the same as or greater than the Pebble proposal. Each streamflow impact that EPA described in its determination is to be compared independently, and any mining operation that causes any one of those changes is fully prohibited.[64] In other words, EPA has foreclosed the possibility of a redesign—if a redesign were even theoretically possible, after the herculean efforts that PLP went through over two decades to create a mining plan with the smallest economically feasible impact. If the company attempted a redesign that might try to appease EPA

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[61] U.S. EPA, Final Determination of the U.S. Environmental Protection Agency Pursuant to Section 404(c) of the Clean Water Act, Pebble Deposit Area, Southwest Alaska, ES-15, 5-8 (Jan. 2023).

[62] *Id.* at ES-23.

[63] *Id.* at ES-15, ES-22. Many of the streams in question are not salmon-spawning habitat, but rather intermittent or ephemeral streams that are dry during spawning season.

[64] *Id.*

by avoiding some or most of the affected watercourse, it still could not escape EPA's veto unless the mining operations managed not to affect *any* of the streams covered in EPA's analysis. And it is not simply a matter of the stream that would be blocked by the proposed tailings dam. EPA concluded that any discharge that would change a stream's flow by more than 20%—even an increase in streamflow—would be an unacceptable impact.[65]

This is an impossible standard. The Pebble deposit, though vast, contains 0.25% to 0.4% copper, comparable to mines elsewhere in the world.[66] Any extraction of the minerals from the deposit will produce waste rock and tailings, as copper mines around the world do, and those materials must go somewhere. An insistence that no deposit of the waste materials can be allowed to alter the flow of any single stream by more than 20%—much less the clear prohibition on building a tailings dam—blocks any actual access to the minerals in the deposit.

Thus, the State is correct to say that EPA has destroyed the use for mining of the entire 309-square-mile area and effectively converted that area into a conservation range.[67] It is not just uneconomical to carry out mining within the area subject to EPA's restrictions. It is physically impossible.

Besides EPA's disregard for the deal that the federal government made with Alaska, and EPA's flouting of the congressional intent, expressed in statute,

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[65] *Id.* § 4.2.4.7.1.

[66] IEA Report 219.

[67] Motion for Leave to File Bill of Complaint at 2, Alaska v. United States, No. 22O157 (July 26, 2023).

that this land be used for mining,[68] a particularly troubling feature of EPA's decision is its refusal to face the severe economic consequences.

As explained above, the world is facing a looming copper shortage against the rapidly growing demand for the metal. Significantly increased mining of copper is necessary to provide the materials needed in millions of electric vehicles, in thousands of miles of new electric transmission and distribution lines, and in gigawatts of solar and wind generation equipment in the United States alone. Significant growth in demand was already set in place in this country and in many others. And Congress has in the last two years made it a priority to drive the electrification and electricity transitions faster. Yet EPA has singlehandedly taken off the table the world's single largest known undeveloped copper deposit. During decades when the United States will be stretching for every last pound of copper, 38 million tonnes of it will remain underground because of EPA's decision.

It seems impossible that EPA could have made that choice without weighing the value (economic and, to be sure, non-economic) of the salmon spawning streams that EPA says the mine would damage, against the enormity of the economic consequences of foregoing this copper resource. Yet EPA did, indeed, refuse to count the cost. In EPA's initial regulations implementing Clean Water Act section 404(c) in 1979, EPA refused to consider economic costs in deciding whether the impacts of a discharge are "unacceptable" (the prerequisite under section 404(c) for EPA to veto a discharge or permit).[69] Imposing a blanket ban

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[68] *Id.* at 7-11.

[69] 44 Fed. Reg. 58,076, 58,078 (Oct. 9, 1979).

across 309 square miles of territory is worlds beyond what EPA contemplated when it first took that position; and this Court has, in recent years, explained repeatedly how unusual and unreasonable it is for an agency to *refuse* to consider the economic fallout from its actions. "[R]easonable regulation ordinarily requires paying attention to the advantages *and* the disadvantages of agency decisions." *Michigan v. EPA*, 576 U.S. 743, 753 (2015) (emphasis in original). EPA nonetheless still insists that when section 404(c) asks whether various potential consequences from a discharge are "unacceptable," 33 U.S.C. 1344(c), the costs and consequences of that decision are irrelevant to the choice.[70] As a result, EPA's determination, putting a serious roadblock in the national and global efforts to transition their economies towards renewable energy sources, does not so much as mention that result.

IV. THE CASE CRIES OUT FOR ORIGINAL REVIEW BY THIS COURT.

The Court's expressed criteria for exercising its original jurisdiction turn partly on whether the applicant State has adequate opportunities to present its claims in other forums. *Mississippi v. Louisiana*, 506 U.S. 73, 77 (1992). As Alaska explains, the State does not have adequate alternatives in this case.

Moreover, this is a matter of the utmost national importance, on multiple fronts. Whether section 404(c) truly gives EPA such license to override other statutory policies, and to prohibit the use of the State's property (and PLP's) on such a massive scale,

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[70] U.S. EPA, Response to Comments on U.S. Environmental Protection Agency Clean Water Act Section 404(c) Determination for the Pebble Deposit Area, Southwest Alaska (Jan. 2023).

is a crucial question about the extent of EPA's authority under the Clean Water Act. Whether EPA can convert the nation's (and the world's) largest untapped supply of copper into a conservation preserve is a question vital to the nascent energy transition.

These questions are important beyond determining whether the country will use or forgo the Pebble minerals. What has happened in this case puts at risk any major mining project. The State of Alaska exchanged its land for the Pebble area, and then Northern Dynasty and PLP invested more than $1 billion, over two decades, to develop a plan to use the resources. That EPA would erase the value of the State's property and the company's investment, without even considering the consequences of its action, generates significant uncertainty for any project seeking Clean Water Act permits—such as mines, and especially copper mines. EPA has not just blocked the development of the single greatest potential contribution to U.S. copper needs. EPA has also made it harder to justify investing in other prospective mines across the United States.

That the Court decide these questions now, rather than wait for them to proceed through a district court and then the Ninth Circuit, is crucial. Time is of the essence. Copper will already be a near-critical material in the 2025 to 2035 timeframe. Undersupply of copper in 10 years will delay the installation, connection, and operation of renewable capacity that is necessary for meeting national goals for reducing carbon emissions while maintaining a healthy economy.[71]

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[71] *See* Paul Denholm *et al.*, Examining Supply-Side Options to Achieve 100% Clean Electricity by 2035, Nat'l Renewable Energy Laboratory Technical Report NREL/TP-6A40-81644x

The United States has emphasized that the next 10 years is "the decisive decade" for those goals.[72] But a mine takes time, particularly a mine on the scale of the Pebble project. Now that EPA has blocked the Pebble mine, the only way for Pebble to contribute to alleviating the medium-term copper shortage will be for the Court to weigh in directly, as it has the undeniable authority to do. Two years in a district court followed by years before the Ninth Circuit, before planning and construction could even possibly be allowed, is too long for the country to wait.

CONCLUSION

Amici Northern Dynasty and PLP urge the Court to grant Alaska's motion and permit the filing of its complaint in the Court's original jurisdiction.

(2022), https://www.nrel.gov/docs/fy22osti/81644.pdf (summarizing generation and transmission needs); U.S. Dep't of State & U.S. Exec. Off. of the President, The Long-Term Strategy of the United States 10 (Nov. 2021) (detailing the commitment of the United States to a steep reduction in carbon dioxide emissions by 2030 and its goal of 100% renewable energy generation by 2035).

[72] U.S. Dep't of State & U.S. Exec. Off. of the President, The Long-Term Strategy of the United States 13 (Nov. 2021).

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Respectfully submitted.

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