

No. 16-1275

IN THE
Supreme Court of the United States

VIRGINIA URANIUM, INC., *et al.*,

Petitioners,

v.

JOHN WARREN, *et al.*,

Respondents.

ON WRIT OF CERTIORARI TO THE UNITED STATES
COURT OF APPEALS FOR THE FOURTH CIRCUIT

**BRIEF *AMICI CURIAE* OF THE ROANOKE
RIVER BASIN ASSOCIATION, DAN RIVER
BASIN ASSOCIATION AND PIEDMONT
ENVIRONMENTAL COUNCIL IN
SUPPORT OF RESPONDENTS**

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INTEREST OF AMICI CURIAE¹

Amici Roanoke River Basin Association, Dan River Basin Association, and Piedmont Environmental Council are 501(c)(3) nonprofit organizations dedicated to preserving and enhancing the resources of the areas they protect. Headwaters of the Roanoke River and the Dan River flow through the Coles Hill site in Pittsylvania County, Virginia, where petitioners propose to mine uranium. Amici have a strong interest in the ability of the Commonwealth of Virginia, in its sovereign capacity, to protect the environmental integrity and economic diversity of their region.

The Roanoke River flows 410 miles from the foothills of the Blue Ridge Mountains to the Albemarle Sound in North Carolina. The Roanoke River Basin economy depends on recreation and tourism, hydropower generation, commercial fishing, manufacturing, and agricultural production. Established in 1945, amicus Roanoke River Basin Association promotes those interests by representing local governments; regional governmental entities; nonprofit, civic, and community organizations; businesses; and individuals throughout the basin.

The Dan River stretches 214 miles from the eastern slope of the Blue Ridge to the Kerr Reservoir in southern Virginia, where it meets the Roanoke

¹ The parties have filed letters with the Clerk indicating blanket consent to the filing of amicus briefs. No counsel for any party authored this brief in whole or in part, and no person or entity other than above-named amici curiae and their counsel made a monetary contribution intended to fund its preparation or submission.

River. Since 2002, amicus Dan River Basin Association has protected and promoted the natural and cultural resources of the Dan River Basin through education, stewardship of natural resources, and promoting outdoor recreation and tourism.

Amicus Piedmont Environmental Council was founded in 1972 to promote and protect the rural economy, natural resources, history, and beauty of the Piedmont region of central Virginia. The organization works directly with the citizens of nine counties in the northern Piedmont, and partners with local organizations to support thriving communities and healthy natural resources in areas throughout Virginia. In the early 1980s, based on its study of the potential impacts of uranium mining in Virginia, the Piedmont Environmental Council urged the adoption of a statewide moratorium, and has continued to educate state legislators, local governments, and communities on the issue since that time.

INTRODUCTION AND SUMMARY OF ARGUMENT

Petitioners attempt to make this case about assertedly ulterior motives of the Virginia legislators who, 35 years ago, enacted a moratorium on the mining of uranium within the Commonwealth, 1982 Va. Acts 426 (Pet. App. 170a–177a); *see* Va. Code § 45.1-283 (Pet. App. 176a); 1983 Va. Acts 3, art. 1, codified at Va. Code § 45.1-283 (Pet. App. 177a–178a)—and the post-enactment motives of succeeding legislators, working group members, and private citizens. But *Congress's* intentions, as reflected in the text and structure of the Atomic Energy Act, 42 U.S.C. §§ 2011 *et seq.* (AEA or Act), should dispose of the case. The AEA's text, structure and history make

clear that it does not preempt Virginia's statutory moratorium.

Mining on private land is a traditional area of state regulation, bearing on fundamental choices about the sometimes incompatible uses to which land can be put and implicating States' core responsibilities to protect residents' health and the local environment. Because mining on private land is an issue that has been traditionally subject to state regulation (indeed, for most of the country's history, exclusively so), petitioners must show that preemption of state law was Congress's "clear and manifest purpose." *Wyeth v. Levine*, 555 U.S. 555, 565 (2009).

Petitioners are unable to identify any statutory text that plausibly supports their preemption theory, and the statutory text that exists refutes it. While the Act sets forth a comprehensive regime of federal regulation of processing, transport, use, and disposal of nuclear material, that regime begins only "*after [the material's] removal* from its place of deposit in nature." 42 U.S.C § 2092. Indeed, even the original version of the AEA, which contemplated a federal monopoly over nuclear development, did not regulate uranium mining on nonfederal land or purport to limit state authority over that activity.

Congress's choice to leave regulation of uranium mining in state hands does not frustrate the development of nuclear power. The AEA enables the federal government to ensure development of uranium ore or other source materials on federal and nonfederal land. The Nuclear Regulatory Commission (NRC) has express authority under the statute, "to the extent it deems necessary to effectuate the

provisions of this [Act],” to issue “permits for prospecting for, exploration for, mining of, or removal of deposits of source material in lands belonging to the United States, *id.* § 2097, and is given broad authority—again, when the Commission “deems” it necessary to effectuate the Act—“to purchase, condemn, or otherwise acquire any interest in real property containing deposits of source material,” *id.* § 2096(b). Thus the Act, as written by Congress, ensures that its purposes may be effectuated without preempting the States’ role— and without judicial intervention.

No language in the Act qualifies States’ authority to regulate uranium mining, or limits the purposes for which they may do so. Petitioners misplace reliance upon a provision that affirms state authority to regulate “activities” under NRC oversight, so long as the States regulate “for purposes other than protection against radiation hazards.” 42 U.S.C. § 2021(k). That provision merely confirms States’ ability to regulate “activities” regulated by the NRC, while preserving federal control over radiological safety matters. It does not speak to uranium mining on private land, which has never been regulated under the AEA.

And none of this Court’s AEA cases supports limiting state authority to regulate or ban uranium mining, a matter that has always been beyond the AEA’s reach. The rule petitioners seek would not only scramble the AEA’s carefully drawn jurisdictional lines; it would also place uranium mining—a particularly harmful and disruptive land use—outside the direct regulatory authority of both state *and* federal government.

Virginia and other States reasonably have chosen to closely regulate or prohibit uranium mining in light of its significant impacts on local resources and communities. Congress clearly left that choice to the States, consistent with our constitutional system of federalism.

BACKGROUND

A. Pittsylvania County

The gently rolling hills of Pittsylvania County, Virginia—the site of petitioners’ proposed uranium mine—are home to more than 60,000 people. Six miles from the Coles Hill site, Chatham, the county seat, is home to a noteworthy historic district and two boarding schools.



Figure 1. Pittsylvania County (2011)

Residents rely heavily on the county’s natural resources for their health and livelihood. Agriculture is a leading economic sector, with more than 1,300

active farms producing crops, livestock, poultry, and dairy products.² Nearly three-quarters of residents rely on private wells for their drinking water.³

Pittsylvania County is also the heart of the Roanoke River watershed, which supplies drinking water for the coastal cities of Norfolk, Virginia Beach, and Chesapeake, Virginia.⁴ The Commonwealth has designated over 50 miles of the Roanoke River immediately east of Pittsylvania County as a State Scenic River, in recognition of its natural beauty and recreational and historic significance. Va. Code §§ 10.1-418, 10.1-401(A)(1). The County's rivers, lakes, and streams also support hunting, fishing, and water sports as both popular recreational activities and generators of tourism revenue.

Pittsylvania County has a humid subtropical climate,⁵ with annual precipitation averaging more

² U.S. Dep't of Agric., 2012 Census of Agriculture, County Profile: Pittsylvania County, Virginia (May 2014), http://www.agcensus.usda.gov/Publications/2012/Online_Resources/County_Profiles/Virginia/cp51143.pdf.

³ U.S. Geological Survey, Water Use Data for Virginia (June 2018), <http://tinyurl.com/ybyl28kc> (estimating county's 2015 population as 62,194), <http://tinyurl.com/y717nxhx> (estimating that, as of 2015, public water supply served 16,789 residents).

⁴ City of Virginia Beach, Policy Report: Uranium Mining in the Roanoke River Basin 2 (2008), http://www.vbgov.com/government/departments/public-utilities/Documents/14.VABeach_Uranium_Mining_Policy_Report.pdf.

⁵ Nat'l Research Council, Uranium Mining in Virginia: Scientific, Technical, Environmental, Human Health and Safety, and Regulatory Aspects of Uranium Mining and Processing in Virginia 40 (2012) ("NAS Report"), <http://doi.org/10.17226/13266>. This peer-reviewed report by the National Academy of Sciences ("NAS") was the culmination of a

than 43 inches per year.⁶ Virginia is also subject to seismic activity and to extreme weather events, including tornadoes,⁷ hurricanes, tropical storms, and heavy rainfall.⁸

B. Uranium Mining

There are two conventional methods for removing uranium from the ground: open-pit mining and underground mining. Both methods have been used in the arid western United States,⁹ where the climate and population density differ significantly from that of Virginia. No open-pit or underground uranium mines are currently operating anywhere in the United States.¹⁰

multi-year examination of “the scientific, technical, environmental, human health and safety, and regulatory aspects of uranium mining, milling, and processing as they relate to the Commonwealth of Virginia . . .” *Id.* at 32.

⁶ Southeast Reg’l Climate Ctr., *Chatham, Virginia (441614): Period of Record Monthly Climate Summary* (2012), <http://www.sercc.com/cgi-bin/sercc/cliMAIN.pl?va1614>.

⁷ Va. Dep’t of Emergency Mgmt., History: Virginia Tornadoes (updated Aug. 2016), <http://www.vaemergency.gov/news-local/tornado-history>.

⁸ NAS Report at 40-41. In August 2011, a 5.8-magnitude earthquake struck Virginia, with its epicenter near Mineral, Virginia, roughly 125 miles from the proposed site. *Id.* at 40.

⁹ 5 Special Waste Branch, U.S. Env’tl. Prot. Agency, EPA 530-R-94-032, Technical Resource Document, Extraction and Beneficiation of Ores and Minerals 4 (Jan. 1995) (“EPA Technical Resource Document”), <http://archive.epa.gov/epawaste/nonhaz/industrial/special/web/pdf/uranium.pdf>.

¹⁰ U.S. Energy Info. Admin., 2017 Domestic Uranium Production Report 10 tbl. 2 (May 2018) (“2017 Domestic Uranium Production”), <http://www.eia.gov/uranium/production/>

In open pit mining, topsoil and rock overburden are removed from the site using explosives or bulldozers, mechanical shovels, and other heavy equipment. EPA Technical Resource Document, *supra* note 9, at 16. The exposed uranium ore is then removed and trucked to an on-site stockpile. *Id.* Non-ore bearing material and overburden are discarded in waste rock piles on-site. *Id.*¹¹

annual/pdf/dupr.pdf. There are six mines currently in operation in the United States that extract uranium using a process known as in situ leaching. *Id.* Petitioners do not deny that this process is infeasible in Virginia. *See* Pet. App. 22a n.2 (Traxler, J., dissenting).

¹¹ Waste rock is rock or ore that has been mined but is not of sufficient value to warrant milling. 1 Radiation Prot. Div., U.S. Evtl. Prot. Agency, EPA 402-R-08-005, Technical Report on Technologically Enhanced Naturally Occurring Radioactive Materials from Uranium Mining 1-4 n.5 (Apr. 2008) (“TENORM Report”), <http://www.epa.gov/sites/production/files/2015-05/documents/402-r-08-005-v1.pdf>.



Figure 2. Open-pit uranium mine, Northern Territory, Australia (1990)

In underground mining, the operator sinks a shaft near the ore body and develops tunnels from the shaft at various depths to access and remove the ore. EPA Technical Resource Document, *supra* note 9, at 16. After explosives are detonated to fragment the ore body, ore and waste rock are removed through shaft conveyances or chutes and hoisted to the surface, with the waste rock again discarded on-site. *See id.* at 16-17; NAS Report, *supra* note 5, at 106.

Once extracted, uranium ore is transferred to a mill, where it undergoes a series of physical and chemical processes that separate the ore from the rock and convert the ore into concentrated uranium oxide, or “yellowcake.” *See* EPA Technical Resource Document, *supra* note 9, at 4, 17. Wastes from the milling process, known as “tailings,” are pumped in slurry form to on-site impoundments. *Id.* at 23.

Because the uranium content of the raw ore is typically only a fraction of one percent,¹² the mining process produces an extremely high volume of waste material—material that is both radioactive and chemically reactive. *See* TENORM Report, *supra* note 11, at 2-7; NAS Report, *supra* note 5, at 192. Water that collects in mine workings must also be pumped out—a process known as “dewatering”—and then may be treated and discharged directly into surface waters. EPA Technical Resource Document, *supra* note 9, at 33-34.

C. Effects of Uranium Mining on Human Health and the Environment

Independent of the radiological safety concerns associated with uranium milling and tailings management—which occur *after* the extraction of uranium ore from the ground—the mining process presents its own set of serious risks to human health and the environment, due to the presence of radiological and non-radiological chemicals in ore deposits, mine water, and waste rock. *See* NAS Report, *supra* note 5, at 205, 209-10.

1. Human Health Effects

The most notorious health effects of uranium mining itself are associated with its radiological character. Numerous studies of uranium miners have found significant increases in the occurrence of respiratory tract cancer, predominantly lung cancer, due to high levels of radon and radon decay products

¹² Worldwide, most uranium deposits have a uranium concentration of 0.05 to 0.5 percent. NAS Report at 111.

in underground uranium mines.¹³ Members of the public living in the vicinity of uranium mines are also at increased risk of radiation exposure from atmospheric deposition of fugitive ore dust, ventilation of toxic exhaust from underground mine shafts, contamination of water supplies, and uncontrolled releases of radioactive materials as a result of extreme events such as floods and earthquakes. *See* NAS Report, *supra* note 5, at 176; EPA Technical Resource Document, *supra* note 9, at 43.

The human health risks from uranium mining are not traceable to radioactivity alone. Mine workers face increased rates of lung cancer and other respiratory disorders due to inhalation of silica dust and diesel emissions from mining operations. NAS Report, *supra* note 5, at 156-57, 162-64. Particulate matter generated from the disturbance of rock and soil, bulldozing, blasting, and vehicular travel can lead to higher rates of asthma in the surrounding community. *Id.* at 202-03.

2. Environmental Effects

a. Surface water quality and quantity. Mining activities—disturbance of land, temporary storage of ores and mining wastes, dewatering of mine workings, and reclamation activities—all have the potential to significantly increase the concentrations

¹³ Agency for Toxic Substances & Disease Registry, Toxicological Profile for Uranium 17 (Feb. 2013), <http://www.atsdr.cdc.gov/toxprofiles/tp150.pdf>; *see also* *Begay v. United States*, 591 F. Supp. 991, 1006 (D. Ariz. 1984) (finding direct relationship between underground uranium miners' radiation exposure and heightened incidence of respiratory tract and lung cancer).

and loads of substances in surface water that impair water quality, including phosphorus, nitrate, metals, metalloids, sediment, and strong acidity. NAS Report, *supra* note 5, at 181, 193. In particular, a process known as acid mine drainage—caused when water flows over or through sulfur-bearing ore—produces an acidic solution containing toxic heavy metals, which can then run off into surface waters. *See id.* at 181-84; *id.* at 181 (problems with acid mine drainage “are nearly ubiquitous . . . for uranium mines around the world”).

Mining also affects the *quantity* of surface water in various ways. Compared to unmined, forested land, areas disturbed by surface mining experience increased surface runoff on-site, which increases stream discharges in downstream waters. NAS Report, *supra* note 5, at 194. Underground mining can increase flows to downstream waters (due to discharge from dewatering) or decrease on-site flows (due to blasting of rock). *Id.*

b. Groundwater quality and quantity. By artificially introducing oxygen into the subsurface and connecting separate aquifers, underground exploration and mining can form acid mine drainage and enhance the solubility and mobility of contaminants in groundwater. NAS Report, *supra* note 5, at 196-97. Lowering the water table to access ore bodies lying beneath the water table can also lower groundwater levels in surrounding wells, potentially causing them to run dry and forcing affected households to find alternate sources of water. *Id.* at 199.

c. Soil and ecological effects. Activities associated with mining generally—including ground

disturbance, emissions from vehicles and construction equipment, and increased human presence—have a number of detrimental effects on the surrounding environment. The removal of soil and overburden causes the loss of porosity and permeability, decreases moisture for plant growth, accelerates erosion, and leads to the loss of organisms, organic matter, and nitrogen vital to healthy soils. NAS Report, *supra* note 5, at 201. The elimination of soil habitat and woodlands, in turn, has long-term ecological effects. *See id.* at 214. And the presence of chemicals in uranium mine water and waste that are toxic to animal and plant life—including dissolved salts, acidity, selenium, copper, aluminum, vanadium, and iron—means that uranium mining poses ecological risks beyond typical mining operations. *See id.* at 205, 209-10, 211-12.

Modern safety practices can reduce, but do not eliminate, the environmental hazards historically associated with uranium mines. Even state-of-the-art uranium mines have experienced acid mine drainage from waste rock piles and adverse effects on aquatic biota from contaminants in treated effluent. *Id.* at 221.

D. Economic Effects of Dependence on Uranium Mining

Pittsylvania County's economy relies on a variety of relatively stable industries, including agriculture, manufacturing, health care, and education.¹⁴ In

¹⁴ Terance J. Rephann et al., *Growing Agribusiness: The Contribution and Development Potential of Agriculture and Forest Industry in the Danville Metropolitan Area* 8-9 (Feb.

contrast, mineral commodity markets tend to be cyclical, and the market for uranium is particularly susceptible to booms and busts. Uranium prices skyrocketed in the 1970s, plummeted in the 1980s and 1990s, then rebounded in the mid-2000s, only to decline steeply again. *See* NAS Report, *supra* note 5, at 93 fig. 3.22. Domestic production peaked in 1980 at nearly 44 million pounds of uranium concentrate, before falling to just over 3 million pounds in 1993.¹⁵ With the price of uranium concentrate remaining low, domestic uranium production sits at 1.2 million pounds today. 2017 Domestic Uranium Production, *supra* note 10, at 16 tbl. 9. Given this instability, uranium mining may do more harm than good for a local economy.

ARGUMENT

“[T]he purpose of Congress is the ultimate touchstone in every pre-emption case.” *Hughes v. Talen Energy Mktg., LLC*, 136 S. Ct. 1288, 1297 (2016) (citation and quotation marks omitted). In such a case, the Court asks whether “Congress, in enacting the Federal Statute, intend[ed] to exercise its constitutionally delegated authority to set aside the laws of a State[.]” *Barnett Bank of Marion Cty., N.A. v. Nelson*, 517 U.S. 25, 30 (1996).

Like limits on uranium mining that other States have imposed, Virginia’s moratorium reflects the Commonwealth’s reasonable judgment that uranium

2013), http://ceps.coopercenter.org/sites/ceps/files/PittDanville_agbusiness_final.pdf.

¹⁵ U.S. Energy Info. Admin., Annual Energy Review 2011, at 275 (Sept. 2012), <http://www.eia.gov/totalenergy/data/annual/pdf/aer.pdf>.

mining could harm the “health, safety, and general welfare” of its residents, Act of Apr. 7, 1982, ch. 269, 1982 Va. Acts 426 (Pet. App. 170a), and could impair the state and regional economy. That is a judgment Congress, in the AEA, plainly left to Virginia to make.

Because mining on private land is a matter of traditional police power and land-use regulation, only a clear signal from Congress could displace state power in this area. The AEA not only lacks a clear signal that Congress preempted state uranium mining prohibitions; it clearly and manifestly leaves such decisions to the States. AEA regulation commences only “after” source material’s “removal from its place of deposit in nature,” 42 U.S.C § 2092 (emphasis added), and when that place of deposit is private land, eminent domain is the sole means by which the resource may be brought within the ambit of the AEA.

The AEA does not cabin the States’ discretion in exercising their traditional land use authority, and it provides no warrant for federal courts to second-guess the motivations of States exercising that authority.

I. State Regulation of Uranium Mining on Private Land Is a Quintessential Exercise of Police Power That Cannot Be Preempted Absent Clear and Manifest Congressional Intent

When Congress legislates in a field “traditionally occupied” by States, courts assume that the “historic police powers of the States [are not] superseded . . . unless that was the clear and manifest purpose of Congress.” *Rice v. Santa Fe Elevator Corp.*, 331 U.S. 218, 230 (1947); see *Wyeth*, 555 U.S. at 565. Because

mining on private land is an “area[] of traditional state regulation,” *Bates v. Dow Agrosiences LLC*, 544 U.S. 431, 449 (2005); see *City of Columbus v. Ours Garage & Wrecker Serv., Inc.*, 536 U.S. 424, 432-33 (2002); *Medtronic, Inc. v. Lohr*, 518 U.S. 470, 485 (1996), and given the undisputed absence here of an express preemption clause, *cf. Puerto Rico v. Franklin Cal. Tax-Free Trust*, 136 S. Ct. 1938, 1946 (2016), the presumption against preemption of “traditional” state authority over local land use applies with full force. Mining on private land implicates core police power concerns for public health, environmental quality, and aesthetics. That is certainly true of uranium mining, which poses both radiological and non-radiological risks for nearby residents and water supplies, and harms natural resources and aesthetic values. See pp. 10-13, *supra*.

Regulation of mining on private land lies at the core of a State’s police powers, implicating “the public interest in health, the environment, and the fiscal integrity of the area[s] under its jurisdiction.” *Keystone Bituminous Coal Ass’n v. DeBenedictis*, 480 U.S. 470, 488 (1987). It is a form of regulation of local land use, “perhaps the quintessential state activity,” *FERC v. Mississippi*, 456 U.S. 742, 768 n.30 (1982); see *Hess v. Port Auth. Trans-Hudson Corp.*, 513 U.S. 30, 44 (1994); *Warth v. Seldin*, 422 U.S. 490, 508 n.18 (1975). See also *Solid Waste Agency of N. Cook Cty. v. U.S. Army Corps of Eng’rs*, 531 U.S. 159, 172-73 (2001) (construing federal statute to avoid interpretation that would raise constitutional questions because of intrusion on States’ traditional authority over local land use).

Until well into the twentieth century, mining activity on private land was generally regarded as beyond Congress's constitutional power to regulate. See *Carter v. Carter Coal Co.*, 298 U.S. 238, 304 (1936) (“Mining brings the subject-matter of commerce into existence. Commerce disposes of it.”); *United Mine Workers of Am. v. Coronado Coal Co.*, 259 U.S. 344, 407 (1922) (“Coal mining is not interstate commerce, and the power of Congress does not extend to its regulation as such.”); *Kidd v. Pearson*, 128 U.S. 1, 21 (1888) (including “mining” among the “interests which in their nature are, and must be, local in all the details of their successful management”).

In eastern States, federal land is relatively scarce, and state common and statutory laws have long governed all aspects of mining. “The individual states comprised within this group, being the paramount proprietors of their mineral lands, could alone prescribe the terms upon which mining rights could be acquired thereon.” 1 Curtis H. Lindley, *The American Law Relating to Mines and Mineral Lands* § 19 (3d ed. 1914).¹⁶

¹⁶ The understanding that States had broad police power concerning mining informed the law applicable to mining on the vast quantities of public land in western states. See *Woodruff v. N. Bloomfield Gravel Mining Co.*, 18 F. 753, 806-09 (C.C.D. Cal. 1884) (enjoining as nuisance the practice of hydraulic mining); *Hicks v. Bell*, 3 Cal. 219, 227 (Cal. 1853). Even when addressing mining on federal land, Congress has preserved an important role for state and local regulation. See 30 U.S.C. § 22 (General Mining Law provision requiring compliance with all state and local laws “not inconsistent with” federal law); *Cal. Coastal Comm’n v. Granite Rock Co.*, 480 U.S. 572, 581-82, 587 (1987); *United States v. Shumway*, 199 F.3d 1093, 1097-98 (9th Cir. 1999).

American mining law was in large part developed in common law adjudication,¹⁷ but state legislatures and administrative agencies also played important roles, “[p]articularly [in] those [places] where coal mining is carried on extensively.” Lindley § 19. More than a century ago, those States had developed “elaborate systems in the nature of police regulations, prescribing the manner in which mines shall be worked, providing for their official inspection, proper ventilation, means of escape in case of accident, and provisions looking to the protection of the miners.” *Id.*

Although Virginia was not a pioneer in mining legislation, *see* Lindley § 19, the Commonwealth adopted its first general legislation on mining more than fifty years ago. From 1966 to 1979, Virginia issued permits for coal mines under its own laws. Va. Code §§ 45.162 to -179 (1966); *id.* §§ 45.198 to -220.5 (1972). In 1979, Virginia assumed primary responsibility for the implementation of the Surface Mining Control and Reclamation Act of 1977 (SMCRA), 30 U.S.C. §§ 1201 *et seq.*, at all coal mines

¹⁷ *See, e.g.,* *Brush v. Lehigh Valley Coal Co.*, 138 A. 860, 862 (Pa. 1927) (finding that contractual release precluded plaintiff's otherwise viable tort claim for pollution of stream); *Continental Coal Co. v. Connellsville By-Product Coal Co.*, 138 S.E. 737 (W. Va. 1927) (reversing injunction against operation of mine alleged to interfere with operation or safety of adjacent mine); *Mahon v. Pa. Coal Co.*, 118 A. 491, 494 (Pa. 1922) (discussing Pennsylvania common law principles governing mining, including rules regarding lateral support of adjacent land), *rev'd* on other grounds, 260 U.S. 393 (1922); *Keppel v. Lehigh Coal & Navigation Co.*, 50 A. 302, 303 (Pa. 1901) (upholding nuisance judgment against owner of coal mine that polluted stream, impairing operation of flour mill). *See also* *Kellyville Coal Co. v. Strine*, 75 N.E. 375, 379 (Ill. 1905) (interpreting provision of state constitution addressed to mine safety).

within its borders. Virginia Coal Surface Mining and Reclamation Act, 1979 Va. Acts ch. 290, codified at Va. Code §§ 45.1-226 to -270. The Commonwealth currently regulates coal and mineral mining (the latter of which is not subject to SMCRA) pursuant to Va. Code § 45.1-161.1 *et seq.*

Although Virginia is under no special obligation to explain its decision to ban uranium mining while permitting (subject to regulation) other forms of mining, there is nothing anomalous about its approach. Iron and coal mining in Virginia predate the Republic—bog iron ore was mined near Jamestown in the 1600s, and mining of the Richmond coalfield began in the 1700s.¹⁸ This lengthy history, beginning long before the environmental and health effects of mining were widely understood, shaped patterns of settlement, economic activity, and public and private investment that are now centuries old. In contrast, uranium mining has never occurred in Virginia, has been prohibited by law for 36 years, and is proposed to occur in an area whose economy developed, and remains organized around, very different land and resource uses.

Regulation of industrial production is, of course, no longer considered beyond Congress's power. See *NLRB v. Jones & Laughlin Steel Corp.*, 301 U.S. 1 (1937); *Hodel v. Va. Surface Mining & Reclamation Ass'n*, 452 U.S. 264 (1981). But even when it has exercised its powers under a broadened reading of the Commerce Clause, Congress has in key respects

¹⁸ Va. Dep't of Mines, Minerals & Energy, *Historic Mining in Virginia* (2015), http://www.dmme.virginia.gov/dmm/historic_mining.shtml.

affirmed States' traditional, far-reaching authority over mining. In enacting SMCRA, "a nationwide program to protect society and the environment from the adverse effects of surface coal mining operations," 30 U.S.C. § 1202(a), Congress expressly preserved States' authority to adopt "more stringent land use controls and regulations of surface coal mining and reclamation," *id.* § 1255(b).

II. The AEA Does Not Regulate Conventional Uranium Mining on Nonfederal Land or Displace Traditional State Authority Over Such Mining

The AEA itself disposes of petitioners' preemption claim. Petitioners have no plausible textual basis for their claim that state regulation of uranium mining is preempted—and the statutory text and structure powerfully refute the argument that Congress *implicitly* preempted state regulation. Instead, Congress deliberately chose to leave the regulation of uranium mining on nonfederal land entirely to state and local authorities, granting the NRC non-regulatory (and non-preemptive) powers to ensure an adequate supply of source materials where the NRC deems it necessary to effectuate the AEA's purposes—which it has not done here.

The AEA's text, structure, and history indicate a deliberate congressional choice, unchanged since the statute was enacted in 1946, to leave to States their traditional authority over all aspects of mining on nonfederal land. Honoring this choice requires rejecting petitioners' creative efforts to find some theory by which preemption could be justified despite (1) the lack of any supporting statutory text, and (2)

pointed indices that Congress affirmatively left the matter to state control and found other means of ensuring sufficient quantities of source material to effectuate the Act's purposes

The AEA gives the NRC “exclusive jurisdiction to license the transfer, delivery, receipt, acquisition, possession and use of nuclear materials.” *Pacific Gas & Elec. Co. v. State Energy Res. Conservation & Dev. Comm’n*, 461 U.S. 190, 207 (1983) (*Pacific Gas*). The NRC is directed to administer an exclusive regime of licensing and regulatory oversight for the safe handling and disposal of nuclear materials. But the AEA’s extensive scheme of federal regulation of nuclear materials applies only to activities occurring “after” the material’s “removal from its place of deposit in nature.” 42 U.S.C § 2092 (emphasis added).¹⁹

Congress chose not to apply the AEA’s regime of federal standard-setting and licensing to mining uranium on nonfederal land. The decision to respect States’ traditional authority was no accidental oversight: Mining is expressly addressed under the AEA, in a provision giving the Commission authority to issue permits for mining of source material in “lands belonging to the United States.” 42 U.S.C. § 2097. The AEA also provides the NRC with non-regulatory means to obtain supplies of uranium and other nuclear source materials still “deposit[ed] in nature” on non-federal land, namely, through negotiated purchase or condemnation. The statute

¹⁹ As noted above, *supra* p. 20, even in regulating surface mining of coal in SMCRA, Congress expressly left intact States’ authority to enact more stringent environmental protections.

authorizes the Commission, “to the extent it deems necessary to effectuate” the AEA, “to purchase, condemn, or otherwise acquire any interest in real property containing deposits of source material,” *id.* § 2097(b), and also to likewise “acquire rights to enter upon any real property deemed by the Commission to have possibilities of containing deposits of source material in order to conduct prospecting and exploratory operations,” *id.* § 2097(c). These provisions for exploring and acquiring land containing uranium or other source material reinforce and complement Congress’s choice to leave undiminished States’ power to regulate uranium mining on nonfederal land.

No provision of the statute authorizes the NRC to regulate—whether by prescribing standards, requiring a license, or otherwise—mining uranium on nonfederal land. Petitioners and the United States concede this point. *See* Pet. Br. 27 (recognizing that the “*mining* of uranium” is “an activity the NRC does not regulate”) (emphasis in original); U.S. Br. 14 (“uranium mining . . . is outside [NRC] jurisdiction”); U.S. Cert. Br. 18 (acknowledging that “States retain the authority to regulate conventional uranium mining” or “to prohibit it altogether”); *see also* Pet. App. 12a (court of appeals’ reference to the NRC’s conclusion that it “lacks the power to regulate” conventional uranium mining on nonfederal land); Resp. Br. 9 (citing longstanding NRC precedent to that effect).

In this carefully crafted, repeatedly amended statute, *see, e.g., English v. Gen. Elec. Co.*, 496 U.S. 72, 81-82 (1990); *Silkwood v. Kerr-McGee Corp.*, 464 U.S. 238, 250-51 (1984), Congress has not included

any language that even arguably preempts state regulation of uranium mining on nonfederal land.

III. Subsection 2021(k) Does Not Operate to Preempt State Regulations Concerning Uranium Mining on Private Land

Lacking any statutory language speaking directly to preemption of state mining regulation, petitioners rely heavily on 42 U.S.C. § 2021(k), to which petitioners impute a powerful, free-floating preemptive force that “controls” this case. Pet. Br. 33.

Subsection 2021(k) cannot bear that interpretation. It is a *non-preemption clause* in a provision designed to return to the States authority over nuclear activities that had previously been a federal monopoly. *See Pacific Gas*, 461 U.S. at 206-09. By its terms, it *preserves* state authority, clarifying that “[n]othing in [Section 2021]” affects States’ authority “to regulate activities for purposes other than protection against radiation hazards.” 42 U.S.C. § 2021(k). Section 2021 addresses various activities subject to regulation by the Commission, including the “construction or operation” of any “production or utilization facility or any uranium enrichment facility,” the export or import of nuclear material; or certain forms of disposal of nuclear materials, 42 U.S.C. § 2021(c). Subsection 2021(k) provides that the Act does not preclude state regulation of *those activities* so long as the State is not regulating for the purpose of protecting against radiation hazards. As this Court explained in *Pacific Gas*, Subsection 2021(k) confirms that Section 2021 was “not intended to cutback on preexisting state authority outside the NRC’s jurisdiction,” and underscores “the distinction drawn in [the AEA] between the spheres of activity

left respectively to the federal government and the states.” 461 U.S. at 209-10.

Neither *Pacific Gas*, nor any other of this Court’s AEA preemption decisions, nor its general preemption jurisprudence supports the notion that the Subsection 2021(k) savings clause operates to preempt state laws protecting against radiation hazards of activities that are not and cannot be regulated by the NRC under the AEA. Indeed, state laws that protect against radiation hazards are many and cover a broad sweep, concerning, for example, radon gas contamination of buildings, *e.g.*, 29 Fla. Stat. § 404.056; the inspection of x-ray equipment in medical offices, *e.g.*, Tex. Health & Safety Code Ann. § 401.064; the introduction of radioactive wastes in sewers, *e.g.*, 70 Ill. Comp. Stat. 2405/18(d); and criminal prohibitions on the use of radioactive substances to poison others, *e.g.*, Ohio Rev. Code Ann. § 2927.24. Such laws are manifestly grounded on concerns about radiation, but they are not preempted by the AEA because the distinction Subsection 2021(k) draws between permitted (non-radiation-based) and preempted (radiation-based) state regulation applies only to the universe of “activities” subject to AEA regulation. Uranium mining is not one of those activities.

Subsection 2021(k) does not address activities that the AEA does not regulate. And it surely does not establish a bizarre blinkering requirement, such that, in exercising their sovereign authority to regulate uranium mining on nonfederal land, States may not consider the radiation hazards associated with such mining for workers, local residents, visitors, and

natural resources—or the potential effects of such hazards on the local economy.

IV. Preemption of State Authority Over Nonfederal Uranium Mining Would Open a Harmful Regulatory Void That Congress Manifestly Did Not Intend to Create

Petitioners’ proposed preemption regime would have striking and dramatic implications for States (and for public safety), by requiring States to allow uranium mining to take place despite their own contrary judgments about the activity’s burdens and benefits—and despite the absence of any federal regime directly regulating that activity’s substantial health, environmental, and economic effects. Petitioners’ theory places States and their residents in a regulatory limbo, where neither the NRC nor the States themselves have clear authority to protect against radiological hazards associated with uranium mining.

That result is at least as contrary to congressional intent as the one this Court rejected in *Pacific Gas*. In concluding that the AEA did not preempt state public utility regulation of nuclear power generators, the Court there recognized as “almost inconceivable” that Congress “would have left a regulatory vacuum.” 461 U.S. at 207-08. Here, as in that case, “the only reasonable inference is that Congress intended the states to continue to make these judgments.”²⁰

²⁰ To be sure, Congress sometimes does choose to preempt state law without providing a substitute federal regulation based on a decision to rely on unfettered market forces. See *Morales v. Trans World Airlines, Inc.*, 504 U.S. 374, 384 (1992). But there

Petitioners' argument would require States confronted with requests to allow uranium mining within their borders to affirmatively license activity against their better judgment or else leave entirely unregulated activity that may have serious adverse implications for public health, the environment, and the local economy. That unpalatable choice is redolent of the requirement, held unconstitutional in *New York v. United States*, 505 U.S. 144 (1992), that a State either regulate according to congressional wishes or "take title" to nuclear waste.

But no such extreme impositions are presented here, because there is no sign Congress intended to put Virginia and other States in that position. Rather, the AEA's clear intent is that States retain their preexisting, plenary authority to regulate (including, where they so choose, to prohibit) mining on nonfederal land within their borders.

**V. The Courts Below Properly Rejected
Petitioners' Attempt to Void Virginia's
*Mining Statute as an Impermissible
Milling Regulation***

The Court should reject petitioners' effort to transform Congress's partial preemption of state regulations of *subsequent* phases of the process of nuclear development—those the AEA subjects to federal licensing and oversight—into a different regime, unmoored from the statute, in which plaintiffs may challenge state regulations of mining on nonfederal land. As an initial matter, petitioners provide no persuasive reason to think Virginia was

is no indication that Congress intended to create such a regime with regard to uranium mining.

not motivated principally by concerns about the impacts of uranium mining itself. See *English*, 496 U.S. at 83 (in case involving state common law claim addressing AEA-regulated activity, looking to relevant common law’s “paramount’ purpose”) (quoting district court). This Court’s AEA precedent cuts strongly against petitioners’ demand federal courts plumb for claimed hidden motives behind state regulations in areas Congress has left to state regulation. See *Pacific Gas*, 461 U.S. at 216 (disclaiming an “attempt[] to ascertain California’s true motive” for regulating economic aspects of nuclear power plant). The Virginia General Assembly was concerned with what it actually regulated—uranium *mining*—and there is no basis for this Court to conclude otherwise. See *Shady Grove Orthopedic Assocs., P.A. v. Allstate Ins. Co.*, 559 U.S. 393, 403-05 (2010) (urging that state law should be judged “as written” rather than based upon an assessment of the “subjective intentions of the state legislature”).

More fundamentally, however, petitioners’ argument is incompatible with Congress’s decision in the AEA to exclude from the Act’s regime of federal regulation uranium mining on nonfederal land. Judicial fact-finding in search of impermissible legislative motives is not only likely to be inefficient and highly uncertain; it also disregards the bright line Congress has clearly and consistently drawn in the AEA between state and federal roles. Congress’s decision to leave regulation of mining on nonfederal land to the States should be dispositive of this case. The plain (and sole) object of the Virginia statute at issue here is mining itself. And as set forth above, see pp. 10-15, *supra*, given the potential human health, environmental, and economic impacts associated with

the types of uranium mining petitioners seek to pursue, Virginia had ample reason to exercise its authority in this area.

In the absence of clear congressional intent to preempt, totally absent here, courts should not disturb a State's judgment that the considerable impacts of uranium mining are incompatible with diverse and largely agricultural local economies like that of Pittsylvania County. Nor is Virginia's judgment unique among the States. For over thirty years, Maine, New Hampshire, New Jersey, New York, North Carolina, Pennsylvania, and Vermont have similarly imposed severe restrictions or outright bans on uranium mining.²¹

Unlike with the activities the Act subjects to NRC regulation, Congress did not prescribe, or invite federal courts or the NRC to police, the reasons why a State regulates uranium mining. If the mining ban here is subject to intrusive scrutiny from a federal court based upon allegations of improper, ulterior motives, then Congress's decision to respect traditional state authority would mean little. Congress readily could have provided that state regulation of mining on nonfederal land is proper only

²¹ Me. Stat. tit. 11, § 489-B (prohibiting mining); N.H. Rev. Stat. Ann. § 125-F:1 (declaring public policy of State to prohibit uranium mining); N.J. Stat. Ann. § 13:1J-3 (prohibiting mining, milling, and processing); N.Y. Evtl. Conserv. Laws Ann. § 22-1070 (prohibiting mining); N.C. Gen. Stat. Ann. § 74-89 (imposing two-year delay on issuance of mining permit from filing of application); 34 Pa. Cons. Stat. § 722(c) (prohibiting uranium mining on Pennsylvania Game Commission land); Vt. Stat. Ann. tit. 10, § 6083(c) (requiring legislative approval prior to agency consideration of application for uranium mining or processing).

for specific purposes; it pointedly did not. Or Congress could have authorized the NRC to declare particular areas or parcels to be outside States' normal and full regulatory powers; it did not. The procedure petitioners propose here is flatly inconsistent with the very federal legislative scheme it purports to enforce.

Petitioners' reliance on *Skull Valley Band Of Goshute Indians v. Nielson*, 376 F.3d 1223 (10th Cir. 2004), is misplaced. The claim in *Skull Valley* involved state action (and federally regulated activity) dramatically different from those here. Utah had adopted a set of coordinated measures designed to obstruct the construction of a waste management facility by banning its construction or attaching onerous conditions, and by imposing special restrictions on the use of instrumentalities of commerce—state roads—to carry nuclear waste to the facility. *Id.* at 1245-54. The Utah planning, licensing, and road access provisions all targeted “the transportation and storage of [spent nuclear fuel],” *id.* at 1245, both AEA-regulated activities. Affirmance in this case does not imply approval of efforts like Utah's, and, should a case like *Skull Valley* arise (and be resolved differently in lower courts), this Court will have ample tools to protect the federal interests involved. There is no need to stretch preemption to an area Congress deliberately did not touch, and create a problematic gap in health and environmental protections, in order to address scenarios like *Skull Valley*.

Nor does *Entergy Nuclear Vermont Yankee, LLC v. Shumlin*, 733 F.3d 393 (2d Cir. 2013), support petitioners' position. That case involved Vermont laws that directly regulated whether a nuclear power

plant could continue to operate—a quintessential AEA-regulated activity. The *Entergy* court concluded that new and different conditions Vermont has imposed on the plant’s continued operation were grounded on radiological safety concerns; the court analogized the Vermont statutes to a “‘state moratorium’ on nuclear energy ‘grounded in safety concerns.’” *Id.* at 428 (quoting *Pacific Gas*, 461 U.S. at 213). Regardless of whether the *Entergy* opinion properly interpreted the Vermont laws at issue there (or even correctly applied the AEA to state power plant licensing, *see* 733 F.3d at 435-36 (Carney, J., concurring)), *Entergy* is not fairly comparable to this case, where Virginia is regulating a subject matter the AEA quite conspicuously leaves to the States.

Although Congress is well aware of the potentially significant health, environmental, and economic effects of uranium mining—and of the national interests that might be served by asserting federal authority even over this traditional state area—it has chosen to leave to state and local governments the regulation of conventional uranium mining on private land. Congress could regulate uranium mining by displacing state law broadly, or, as with SMCRA, by imposing preemptive minimum standards, leaving States free to regulate more stringently. But Congress has chosen to do neither of these things, opting instead for a regime under which the NRC can permit mining on federal land and can obtain uranium deposits on nonfederal land by contract or condemnation, whenever the responsible federal agency deems such actions necessary to effectuate the Act’s purposes. Honoring Congress’s considered choice in the AEA means rejecting petitioners’ preemption claims here.

Petitioners’ “obstacle” preemption theory (Pet. Br. 54-59) also lacks merit. Congress was aware that leaving mining regulation to the States would necessarily bear upon the availability, timing, and cost of uranium that might otherwise be mined from nonfederal lands. The decision not to preempt state law, even as Congress preempted state regulation of other aspects of the production cycle, was a deliberate decision to uphold States’ traditional authority despite those costs. The AEA’s provision for bringing real property containing uranium deposits into federal ownership “to the extent [the NRC] deems necessary to effectuate” the AEA’s purposes, 42 U.S.C. § 2096(b), as well as its provision for the NRC to administer mining on federal land when the federal agency “deems” it necessary to effectuate the AEA’s purposes, *id.* § 2097, together ensure that leaving state authority in place will not unduly impede those purposes. The AEA does not establish a rule that States must allow any activity that conceivably advances nuclear power generation: To the contrary, Congress obviously recognized that the States’ exercise of the authority over the areas left to them under the Act could have implications for particular nuclear projects, even the construction of a nuclear power plant. *See Pacific Gas*, 461 U.S. at 216 (finding retained authority “easily sufficient to permit a state so inclined to halt the construction of new nuclear plants by refusing on economic grounds to issue certificates of public convenience in individual proceedings”).

* * * *

The vitality of our system of federalism depends just as much on honoring Congress’s choices not to

displace state law as it does on striking down acts of Congress that interfere with state prerogatives. *Cf. Bond v. United States*, 134 S. Ct. 2077, 2090-93 (2014). Here, Congress's choice not to interfere with States' authority to regulate conventional uranium mining on nonfederal land could hardly be more clear. The AEA establishes an elaborate regime addressing various phases of the process of producing nuclear energy after uranium has been removed from its place of deposit, and it provides means for the federal government to facilitate development of source materials when the responsible federal agency deems necessary it to effectuate the Act's purposes. But the Act does not limit States' longstanding authority to regulate the mining of uranium on nonfederal land. Petitioners' strained efforts to disturb that judgment should be rejected.

CONCLUSION

The Fourth Circuit's judgment should be affirmed.

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SEPTEMBER 4, 2018