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March 1, 2024

Coconino County Board of Supervisors 219 East. Cherry Ave Flagstaff, Arizona 86001

Re: Resolution No. 2024-09—Pinyon Plain Mine

Dear Members of the Board:

Energy Fuels Resources (USA) Inc. ("EFRI") is aware that the Coconino Board of Supervisors ("Board") adopted a resolution (No. 2024-09) on February 20, 2024. In that resolution, the Board made several false and defamatory assertions regarding uranium mining, EFRI, and the Pinyon Plain Mine. Additionally, based on those assertions, the Board reaffirmed "its long history of opposition to uranium mining and hauling on or near Grand Canyon National Park" and urged the closure of EFRI's Pinyon Plain Mine. The resolution also improperly requested "a re-evaluation of the mine's existing Environmental Impact Statement from the 1980s to ensure that it complies with current scientific knowledge and meets current environmental, health, and safety standards taking into account the latest research and hydrogeology." It is disappointing that the Board did not advise or notify EFRI of the Board's consideration of the resolution or provide EFRI with an opportunity to comment on the false claims underlying the resolution.

The purpose of this letter is to respond to the false assertions in the resolution and to outline why the actions suggested in the resolution related to EFRI and the Pinyon Plain Mine are prohibited by applicable federal and state law. EFRI respectfully requests that the Board retract its February 20, 2024 resolution against EFRI and the Pinyon Plain Mine.

Notwithstanding the adoption of the resolution, EFRI remains committed to working cooperatively with the County and the Board with respect to the Pinyon Plain Mine, including allowing the Board to visit the Pinyon Plain Mine.

<u>The assertions in the Board's resolution are not only false but appear to be derived from talking</u> point claims by Tribal and environmental organizations in opposition to the Pinyon Plain Mine that have been proven repeatedly to be without any merit.

The assertions against the Pinyon Plain Mine in the Board's February 20, 2024 resolution appear to be based on the same speculative and unsubstantiated allegations that the Havasupai Tribe and a group of environmental organizations have unsuccessfully made against the mine for decades. For instance, the Board asserts on page 1 of the resolution that "mining and hauling uranium ore from Pinyon Plain Mine increases the risk of contaminating the water of the Havasupai people and the complex network of springs and groundwater in the Grand Canyon." Any allegation that the mine will contaminate groundwater or other water sources is, however, inconsistent with the robust

hydrogeologic reviews that have occurred at the mine when the U.S. Forest Service ("USFS") approved the plan of operations for the mine in 1986,¹ when the USFS updated its environmental review of potential impacts from the mine in 2012,² and when ADEQ issued an individual aquifer protection permit ("APP") for full operation and subsequent closure of the mine on April 28, 2022.³ These reviews concluded that there would be no adverse impacts to groundwater from the operation of the Pinyon Plain Mine given the natural geology and site conditions at the mine that would prevent any groundwater impacts.

These scientifically based conclusions, which have been confirmed through multiple administrative and federal court reviews, are further supported by the robust and redundant protections against any potential off-site impacts to groundwater imposed under the recently issued individual APP for the Pinyon Plain Mine. EFRI recently documented in detail the lack of any potential groundwater impacts from the operation and subsequent closure of the Pinyon Plain Mine in a letter (copy enclosed) submitted on February 8, 2024⁴ to Trevor Baggiore, Water Quality Division Director for the Arizona Department of Environmental Quality ("ADEQ") (and copied to Karen Peters, CEO for ADEQ, and Governor Katie Hobbs) (see pages 2-9 and 12-13 of the letter).

The Board also makes false assertions in the resolution (see bottom of page 1) regarding alleged impacts from transportation of ore from the mine to EFRI's White Mesa Mill. EFFI's February 8th letter (enclosed, see pages 9-10) explains why these claims are false and misleading. As noted in the February 8th letter, EFRI is committed to ensuring that transportation of ore from the mine to the mill is conducted safely and in accordance with all applicable regulatory and permitting requirements, including all marking, labeling, and placarding requirements of the U.S. Department of Transportation, the requirements in the mine's Class II air quality permit to "operate and maintain the haul trucks in such a way that ore cannot escape through any slits or openings in the bed of the truck," and, in the unlikely event of an accident that cause spillage of ore material, implementation of emergency response actions to ensure immediate cleanup of any spilled

¹ See extensive groundwater impact evaluations and conclusions contained in the documents listed under the heading "Environmental Impact Statement and Plan of Operations" at the USFS website for the Pinyon Plain Mine (https://www.fs.usda.gov/detail/kaibab/home/?cid=FSM91_050263).

² See updated groundwater impact summary information contained in the documents listed under the heading "Pinyon Plain Mine Review" at the USFS website for the Pinyon Plain Mine (<u>https://www.fs.usda.gov/detail/kaibab/home/?cid=FSM91_050263</u>).

³ See extensive groundwater impact evaluations contained in the documents listed under the heading "Individual Aquifer Protection Program (APP) Permit" at the ADEQ website for the Pinyon Plain Mine (<u>https://azdeq.gov/PinyonPlainMine</u>).

⁴ The February 8th letter responded to allegations made by the Havasupai Tribal Council in a statement issued on January 11, 2024 and in correspondence dated January 29, 2024 that a group of environmental organizations (headed by the Sierra Club and the Center for Biological Diversity) sent to Governor Hobbs. The February 8th letter documents the false and defamatory nature of the allegations raised by the Havasupai Tribal Council and by the environmental organizations regarding the Pinyon Plain Mine and its current regulatory and permitting status. The letter also documents that the Havasupai Tribe and environmental organizations have opposed the Pinyon Plain Mine for decades and have repeatedly litigated various aspects of the mine including alleged groundwater impacts and the need for supplemental environmental reviews. Each of these claims and associated allegations have consistently been determined to be without any legitimate factual or legal basis.

material and notification to appropriate federal, state, local, and tribal authorities. In addition to these protective measures to ensure safe transportation of ore, it should be noted that trucks and rail cars routinely haul liquids and other materials on public roads, highways, and rail lines through and near Flagstaff and to Tusayan and South Rim National Park facilities that are orders-of-magnitude more dangerous and hazardous than uranium ore, including gasoline, propane, diesel, pesticides and other materials.

Finally, at the top of page 2 of the resolution the Board makes broad assertions regarding the value and impacts from uranium mining within the boundaries of the Biden Administration's recent national monument designation of one million acres of USFS and BLM land surrounding the Grand Canyon National Park. None of these assertions are accurate as applied to modern uranium mining or to the Pinyon Plain Mine specifically. In terms of value, Northern Arizona contains some of the nation's best uranium deposits, and uranium is a natural part of the environment. Uranium is primarily used as the fuel for clean nuclear energy, which today provides about 20% of all electricity in the United States and about 50% of our country's clean, carbon-free electricity. The uranium deposits of Northern Arizona are very high-grade, close to the surface, and require very little land area to mine. As a result, they are among the lowest-cost and lowest-impact sources of uranium in the United States and the ore mined from these deposits, including from EFRI's Pinyon Plain Mine, will provide low cost, domestically sourced uranium to support the current Administration's clean energy policies instead of deepening our country's current overdependence on Russia.

With respect to potential impacts from mining of the uranium deposits in Northern Arizona, the modern mining of these deposits – known as "breccia pipes" – is heavily regulated by an array of state and federal laws and regulations. The mine footprint associated with these deposits is very small, resulting in very low-impact mines – typically less than 20-acres in size (the Pinyon Plain Mine surface footprint is approximately 14 acres). About ten of these deposits have been mined since the 1970s and the uranium extracted equates to approximately 50 reactor years of carbon-free fuel. Due to the small mining footprint and impact, the land can be fully restored to its former uses, including recreation and conservation, once mining is complete. There is no evidence that any of these "breccia pipe" mines that have operated in the past 50 years have caused any adverse environmental or health impacts.

Unfortunately, like most industries in the United States and throughout the world, regulatory standards prior to the latter part of the twentieth century were not as stringent, which resulted in worker health issues and numerous abandoned uranium mines in the 1940s and early 1960s, many of which are on the Navajo Nation and remain un-reclaimed. Fortunately, the government and environmental regulation of uranium mining and milling industries, like most other industries, has improved dramatically over time, resulting in today's highly protective and all-encompassing standards.

As a result of these all-encompassing standards and permitting requirements, the Pinyon Plain Mine is a highly regulated, state-of-the-art mine that is fully protective of public health, safety, and the environment and sets the world standard for modern, sustainable underground uranium mining. To achieve this status, EFRI has invested tens of millions of dollars in construction and permitting costs on the Pinyon Plain Mine alone, including additional millions of dollars in legal and other related expenses in support of the USFS to defend the mine's USFS-approved plan of operations and other approvals. The mine and its associated approved access and ore transportation routes have been found repeatedly by USFS and federal courts to be fully protective of public health, safety, the environment, and surrounding cultural and other land uses, in direct contrast to the general and unsupported uranium mining assertions by the Board.

<u>The actions suggested in the Board's resolution are contrary to state and federal laws and</u> inconsistent with federal court decisions specific to the regulatory status of the Pinyon Plain <u>Mine</u>.

While EFRI recognizes that the resolution does not actually implement any specific action, the actions requested or suggested in the resolution against EFRI and the Pinyon Plain Mine would appear to violate state and federal laws. For example, A.R.S. § 11-1611(A) prohibits a county from taking "*any action* that materially increases the regulatory burdens on a business unless there is a threat to the health, safety and welfare of the public that has not been addressed by legislation or industry regulation within the proposed regulated field" (emphasis added). A.R.S. § 11-1604(B) also provides that "unless specifically authorized, a county shall avoid duplication of other laws that do not enhance regulatory clarity and shall avoid dual permitting to the maximum extent practicable." The operation of the Pinyon Plain Mine and the associated transportation of ore from the mine to EFRI's White Mesa Mill in Southern Utah have been fully authorized and permitted pursuant to numerous federal and state authorities and determined under the same authorities to pose no threat to health, safety, or welfare of the public or to the environment. Consequently, the Board has no authority to attempt to take or even suggest further actions that would increase the regulatory burden on EFRI or the Pinyon Plain Mine.

Beyond the likelihood of violating applicable state law, the Board's request in the resolution that the Pinyon Plain Mine's existing Environmental Impact Statement ("EIS") be reevaluated is not consistent with federal law and is contrary to specific federal court holdings related to the Pinyon Plain Mine. The U.S. Supreme Court has clarified that a supplemental EIS under the National Environmental Policy Act ("NEPA") is required only "[i]f there remains 'major Federal actio[n]' to occur, and if the new information is sufficient to show that the remaining action will 'affec[t] the quality of the human environment' in a significant manner or to a significant extent not already considered" *Marsh v. Oregon Natural Resources Council*, 490 U.S. 360, 374 (1989) (quoting 42 U.S.C. § 4332(2)(C)); *see also Norton v. Southern Utah Wilderness Alliance*, 542 U.S. 55, 73 (2004). The U.S. Supreme Court's holding on when a supplemental EIS may be required has been incorporated into the Council on Environmental Quality's NEPA regulations at 40 C.F.R. § 1502.9(d)(1).

As applied to the Pinyon Plain Mine, there are no major federal actions remaining to occur and therefore there is no legal basis for a reevaluation of the EIS for the mine. Further, there is no new information suggesting in any way the mine will significantly affect the quality of the human environment to an extent not already considered. In contrast, all potential impacts relating to the

mine have been fully vetted and considered. Although opponents of the mine continue to raise concerns with the mine, these are the same concerns that have been raised for the past 35+ years and continually found by federal and state agencies and federal and state administrative courts to be without any merit.

In fact, the Havasupai Tribe and environmental organizations including the Sierra Club and the Center for Biological Diversity argued in a 2013 lawsuit filed with the federal district court of Arizona that the USFS was required to perform a new EIS before allowing the Pinyon Plain Mine to resume operations based on the USFS's decision to complete a valid existing rights determination. The federal district court rejected this argument on several grounds. Grand Canyon Trust v. Williams, 98 F.Supp.3d 1044, 1062-1065 (D. Ariz. 2015), aff'd, 906 F.3d 1155, 1163 (9th Cir. 2018). First, the court clarified that resumption of mining activities under the plan of operations approved by the USFS after full NEPA review did not constitute a new major federal action that required preparation of another EIS. Id. at 1063. Second, the court held that the valid existing rights determination was not a required approval for mining to continue and that not every federal approval equates to a major federal action. Id. Third, the court noted (see 98 F.Supp.3d at 1063) that the facts associated with the Pinyon Plain Mine were "nearly identical" to a decision issued in Center for Biological Diversity v. Salazar, 791 F.Supp.2d 687 (D. Ariz. 2011), aff'd, 706 F.3d 1085 (9th Cir. 2013), which held that a requirement to supplement the original EIS of an already approved mine was not triggered by post-approval actions conducted by the approving federal agency.⁵

Based on the above information, EFRI respectfully repeats its request that the Board retract its February 20, 2024 resolution (No. 2024-09). The resolution is based on recycled assertions against uranium mining in general and the Pinyon Plain Mine in specific that have been found repeatedly to be false and misleading. Not only is the resolution based on false assertions of potential impacts and risks, the requested actions in the resolution against the Pinyon Plain Mine would be contrary to state and federal laws, and prior federal court decisions.

⁵ In the *Salazar* case, the plaintiff environmental organizations opposed to the Arizona 1 Mine located north of the Grand Canyon National Park argued that although a plan of operations for the Arizona 1 Mine was approved by the Bureau of Land Management ("BLM") in 1988 after completion of a full EIS, the BLM's requirement in 2007 to update the mine's reclamation bond and obtain a clean air permit before resuming operations constituted a major federal action that required a supplemental EIS. 791 F.Supp.2d at 690. These arguments were summarily rejected. The *Salazar* court held that a supplemental EIS was not required because BLM had already complied with NEPA in 1988 and explained that BLM's continued monitoring of the Arizona 1 Mine to ensure compliance with relevant laws does not require EIS supplementation. *Id.* at 698. The *Salazar* decision was affirmed by the Ninth Circuit Court of Appeals. *Center for Biological Diversity v. Salazar*, 706 F.3d 1085, 1095-1096 (9th Cir. 2013) ("post-project-approval functions [such as updating of the reclamation bond and obtaining a clean air permit] are the type of monitoring and compliance activities that this court has determined do not trigger NEPA's requirements").

Very truly yours,

D.

Mark S. Chalmers President and Chief Executive Officer Energy Fuels Inc.

Enclosure



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February 8, 2024

Via Electronic (baggiore.trevor@azdeq.gov) & Regular Mail

Mr. Trevor Baggiore Water Quality Division Director Arizona Department of Environmental Quality 1110 W Washington Street Phoenix, Arizona 85007

Re: *Pinyon Plain Mine*

Dear Mr. Baggiore:

Our client, Energy Fuels Resources (USA) Inc. ("EFRI"), is aware of recent statements and related allegations from tribal representatives in response to the authorized mining at the Pinyon Plain mine, including a statement¹ issued by the Havasupai Tribal Council on January 11, 2024. In reliance on these demonstrably false statements and allegations, a group of environmental organizations (headed by the Sierra Club and the Center for Biological Diversity) sent correspondence² dated January 29, 2024 to Governor Hobbs asking her to "revisit and correct" permitting of the Pinyon Plain mine by limiting "permitting to closure and post-closure monitoring and maintenance activities."

On behalf of EFRI, the purpose of this letter is to address the recent statements and allegations made by the Havasupai Tribal Council and the environmental organizations about the mine, which are false and do not create any basis for revisiting the robust permitting that already exists at the site. This letter also provides the Arizona Department of Environmental Quality ("ADEQ") (and other state authorities) with additional background and context surrounding the regulatory and permitting status of the mine, including its standing under federal and state environmental and land use management laws. As the state authority responsible for the comprehensive groundwater permitting at the site, EFRI would welcome a visit from ADEQ to confirm EFRI's ongoing compliance with the applicable laws and permit requirements.

¹ See <u>https://www.grandcanyontrust.org/sites/default/files/resources/Statement-HavasupaiTribalCouncil-UraniumExtraction-CanyonMine-01-11-24.pdf</u>.

² See <u>https://biologicaldiversity.org/programs/public_lands/mining/Grand_Canyon_Uranium_Mining/pdfs/Gov-Hobbs-Pinyon-Plain-Uranium-Mine-Letter.pdf</u>.

It is important to recognize that the Havasupai Tribal Council and the primary environmental organizations that signed the January 29th letter to Governor Hobbs are the same entities that submitted comments to ADEQ's recent issuance of an individual aquifer protection permit ("APP") for full operation and subsequent closure of the Pinyon Plain mine. Both the Havasupai Tribal Council and the environmental organizations had an opportunity to appeal issuance of the permit and declined to do so. The request for the Governor, and presumably ADEQ—as the state agency with authority to regulate potential discharges to groundwater—to reopen the individual APP is a highly improper attempt to side-step Arizona's administrative procedural requirements and other statutory and regulatory rights that protect permit holders from such politicized actions.

The Havasupai Tribe and environmental organizations have opposed the Pinyon Plain mine for decades and have litigated various aspects of the mine including alleged groundwater impacts on multiple occasions, in federal district court, the Ninth Circuit, and Arizona administrative court. In these lawsuits, the tribe's and environmental organizations' claims have continually and consistently been determined to be without any merit to prevent the lawful operation of the mine. The more recent allegations from the tribe, which were then used by the environmental organizations to support their January 29th letter to Governor Hobbs, are nothing more than a rehash of the same speculative and unsubstantiated groundwater impact allegations that have been unsuccessfully lodged against the mine for the past 35+ years.

<u>The allegations from the Havasupai Tribal Council's January 11th statement not only are false but stem from the same unproven arguments around potential impacts to groundwater quality and other media that the tribe has been making since 1986.</u>

The Pinyon Plain mine has not contaminated any aquifers nor will there be any adverse impacts to groundwater or any aquifers during mine operations and subsequent mine closure.

The Havasupai Tribal Council alleges in its January 11th statement that EFRI "has already contaminated one of the two aquifers while digging the mine shaft." This allegation is false and inflammatory. Monitoring for the last several decades in the deeper regional aquifer (*i.e.*, the Redwall-Muav aquifer) has demonstrated no impact from the mine, which is consistent with the historical confirmation by the U.S. Forest Service ("USFS"), federal district courts, the Ninth Circuit, and Arizona administrative courts and agencies of the lack of potential impact to the Redwall-Muav aquifer. Consequently, EFRI assumes any alleged contamination of an aquifer in the Havasupai Tribal Council's statement relates to the upper perched Coconino aquifer (the "C-aquifer"). ADEQ's recent process to issue an individual APP to the Pinyon Plain mine on April 28, 2022 confirmed the complete fallacy of this allegation relating to the C-aquifer. ADEQ's application review process and the resulting permit issuance resulted in the following conclusions from ADEQ regarding potential impacts to the C-aquifer from the past and current activities at the mine:

• "Importantly, during operation of pumping of the shaft, the groundwater flow gradient is radially inward toward the Mine and serves as a robust, long-term pumping test of the

aquifer system." Summary and Response to Public Comments – Pinyon Plain Mine Permit #P-100333, p. 10, (ADEQ April 28, 2022).³

- "The shaft pumping also creates an inward flow direction towards the shaft so all the C-aquifer monitoring wells are upgradient of the shaft at the present time." *Id.* at 29.
- "Presently, the local flow direction in the C-aquifer is radially inward toward the shaft due to the cone of depression created by the shaft." *Id.* at 30.
- "With shaft pumping, the flow direction in the C-aquifer is inward toward the shaft based on constant pumping and the measured heads in the aquifer. This flow regime will likely return to a pre-mining condition after the Mine closes, the shaft is backfilled and sealed, it ceases to collect water, and the local gradient once again reaches an equilibrium, pre-mining, condition." *Id*.

Similarly, the application that EFRI submitted to ADEQ in support of the individual APP demonstrated the following regarding potential impacts to the C-aquifer:

- "Flow of perched groundwater toward the Mine workings . . . will protect the quality of the perched groundwater surrounding the workings, including perched groundwater within the Coconino." *Individual APP Application for the Pinyon Plain Mine*, p. 37 (EFRI, November 11, 2020).
- "Further, in the unlikely event that any seepage from either surface or subsurface operations could occur either during operations or closure, this report will demonstrate that, because of the absence of any large structures in the area; the presence of the low permeability Moenkopi Formation beneath all surface operations; the large thickness of nearly impermeable rock separating the base of the Mine workings from the regional aquifer; the confined nature of the regional aquifer; and the inward flow from the Coconino during mining and engineered protections during closure, *the potential impacts to either the regional aquifer or perched Coconino groundwater are considered negligible to none.*" *Id.* at Appendix A (Hydrogeologic Report), p. E-ii (emphasis in original).
- "Perched groundwater within the Coconino was detected at the site during installation of the Mine water supply/monitoring well which is completed in the Redwall-Muav aquifer, and later during sinking of the shaft. The shaft acts as a continuously pumping well causing water to flow inward from the Coconino to the shaft, where it, along with any other water seeping into the shaft, is collected in a lined sump and pumped to the lined Impoundment at the surface." *Id.* at Appendix A (Hydrogeologic Report), p. 2.
- "Perched groundwater was encountered within the Coconino during sinking of the Mine shaft. The depth to Coconino groundwater is approximately 940 feet bls. As discussed above, the shaft acts as a continuously pumping well causing water to flow inward from the Coconino to the shaft, where it along with any other water seeping into the shaft is collected in a lined sump and pumped to the lined impoundment at the surface. The continuous flow into the shaft protects Coconino groundwater from any potential impacts during mining operations. In addition, the Clean Closure Plan (EFRI, 2020) will protect

³ See <u>https://static.azdeq.gov/wqd/pinyonplain/2022_indpermit_rs.pdf</u>.

the Coconino from any potential impacts after Mine closure." *Id.* at Appendix A (Hydrogeologic Report), p. 3.

• "Because of the absence of any large structures in the area; the presence of the low permeability Moenkopi Formation beneath all surface operations; the large thickness of nearly impermeable rock separating the base of the Mine workings from the regional aquifer; the confined nature of the regional aquifer; and the inward flow from the Coconino during mining and engineered protections during closure, the potential impacts to either the regional aquifer or perched Coconino groundwater are considered negligible to none, as will be discussed in more detail in the remainder of this report." *Id.* at Appendix A (Hydrogeologic Report), p. 4.

• "Seepage from the Coconino has created a cone of depression within the perched groundwater that directs flow inward towards the shaft. Effectively, the shaft acts as a well that is continuously overpumped to the extent that a seepage face is created. As long as the shaft is in use and water is being pumped from the lined sump at the bottom of the shaft, groundwater flow will be directed inward from the Coconino into the shaft.

Potential seepage from perched water zones in other formations penetrated by the shaft (such as the Kaibab, Toroweap and Upper Supai) is relatively small; however, groundwater flow from these formations will also be directed inward toward the shaft." *Id.* at Appendix A (Hydrogeologic Report), p. 50.

• "Overall, openings resulting from the mining operation are expected to have a negligible impact on groundwater quality.

First, the shaft acts as a continuous sink for perched groundwater encountered; because flow is continuously inward toward the shaft, any contaminants that may be present in the shaft cannot migrate outward from the shaft and cannot impact surrounding perched groundwater.

Second, because the lined shaft sump will be the lowest point in the Mine shaft, all water seeping into the workings will be collected in the lined sump and excess water not used for mining purposes will be pumped to the lined impoundment at the surface." *Id.* at Appendix A (Hydrogeologic Report), p. 51.

While EFRI is taking and has taken steps (*e.g.*, drilling of the ventilation shaft and construction of the lined ore pad) at the Pinyon Plain mine necessary for the safe removal of ore from the mine consistent with its individual APP, its USFS-approved mine Plan of Operations⁴, and other permits

As part of the USFS's initial comprehensive review of the Plan of Operations, the USFS thoroughly evaluated all potential groundwater impacts associated with the development and operation of the Pinyon Plain mine, including the potential for the mine shaft to receive inflow from intercepted perched groundwater both during mining and after reclamation. This evaluation was conducted under NEPA through an extensive Environmental Impact Statement

⁴ Because the Pinyon Plain mine is located on land managed by the USFS, it requires a plan of operations approved by the USFS for development and operation. *See* <u>https://www.fs.usda.gov/detail/kaibab/home/?cid=fsm91_050263</u>. EFRI's predecessor filed a Plan of Operations with the USFS in October 1984 to develop and operate the site as an underground mine. The Plan of Operations (pp. 2, 11, 17-18) describes three specific areas that would be disturbed during the mine's life: (1) a 14.7-acre mine site and adjacent diversion drainage channels; (2) an electric powerline tying the mine to public power, and (3) USFS roads for mine access and haulage. USFS approved the Plan of Operations and the associated land disturbances for the mine site and utility and haulage access routes after substantial environmental review under the National Environmental Policy Act ("NEPA").

and authorizations, none of these activities have changed the fully-protective permitting and natural-based conditions found at the mine or in any way impacted the C-aquifer. The mining and ventilation shafts continue to operate as continuous sinks and all water encountered in the shafts and mine is collected in a lined sump and pumped to the lined impoundment at the surface of the mine. Further, all shaft-sinking activities have taken place outside the uranium ore zone, which was not reached until actual mining started in December 2023, making it even more unlikely that EFRI "has already contaminated one of the two aquifers while digging the mine shaft."

In addition to the evidence outlined above demonstrating that there has been and will be no impact to the C-aquifer from the Pinyon Plain mine, either during mine operation or mine closure, a federal monitoring well was installed in the C-aquifer. As part of the U.S. Geological Surveys' ("USGS") implementation of the Science Plan designed to meet the requirements of the U.S. Department of Interior's ("DOI") January 9, 2012, Record of Decision to withdraw over 1 million acres from new mineral entry under the Mining Law of 1872 and to "continue gathering and assessing scientific data that address unknowns and uncertainties related to uranium exploration and mining activities during the withdrawal period," the USGS installed a groundwater monitoring well in the C-aquifer in 2017. The purpose of this groundwater monitoring well was to "monitor water chemistry in the perched (not regional) groundwater system near the mine for possible changes associated with mining activities, and to collect geophysical data to inform future studies." The well is located just southwest of the current mine fence in the presumed direction of perched groundwater flow in the area. Monitoring data have been collected from this well since 2017, and, according to the USGS, the well will continue to be monitored by USGS during the Pinyon Plain mine's mining, reclamation, and post-reclamation time periods. Monitoring data collected since 2017 are available on-line through the USGS' National Water Information System at https://nwis.waterdata.usgs.gov/nwis. Monitoring from this well confirms there have been no impacts to the C-aquifer from the Pinyon Plain mine.

^{(&}quot;EIS") (https://www.fs.usda.gov/Internet/FSE DOCUMENTS/stelprdb5346657.pdf) and resulting Record of Decision ("ROD") (https://www.fs.usda.gov/Internet/FSE DOCUMENTS/stelprdb5346658.pdf). As a result of this evaluation, the USFS concluded that the mine would not pose any adverse impacts to groundwater, whether to the Redwall-Muav aquifer or to perched groundwater in the C-aquifer. As an added precaution, the USFS required additional protective measures (*e.g.*, installation and monitoring of a groundwater monitoring well in the regional Redwall-Muav aquifer near the mine shaft) as part of its EIS and ROD.

USFS confirmed its "no groundwater impact" findings in а June 2012 document (https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb5376042.pdf) ("2012 Mine Review"). That document summarized an updated review of the original USFS Plan of Operations and associated environmental review documents, as well as more up to date hydrogeologic information. The review was conducted by a 13-person interdisciplinary team with expertise in minerals and geology, surface and groundwater, air quality, transportation, tribal consultation, heritage resources, vegetation, NEPA, and socioeconomic issues.

Since 1986, the Havasupai Tribe and environmental organizations have repeatedly challenged and asserted that the Pinyon Plain mine will adversely impact groundwater and seeps and springs in the Grand Canyon. The USFS carefully and thoroughly investigated and addressed these assertions on two separate occasions and concluded that they have no merit (*i.e.*, in the Final EIS and ROD and in the 2012 Mine Review). Those decisions were challenged in federal courts in two separate lawsuits. The Federal District Court and Ninth Circuit Court of Appeals in San Francisco concluded that the USFS's actions were appropriate and rejected all the Havasupai Tribe's and environmental organization's claims.

Beyond the ongoing demonstration of no impact to the C-aquifer, the requirements of the recently issued individual APP⁵ to the Pinyon Plain mine further confirm that there will be no impacts to any aquifers, whether to the C-aquifer or the regional Redwall-Muav aquifer, from the operation and eventual closure of the mine. Specifically, the individual APP is designed to ensure protection of groundwater including compliance with aquifer water quality standards at the applicable points of compliance ("POCs"), consistent with the specific requirements of the APP statute (see A.R.S. § 49-243(B)(2), (3)). Section 1.0 of the individual APP specifically provides that "[t]he permittee shall construct, operate and maintain the permitted facilities ... [s]uch that Aquifer Water Quality Standards (AWQS) are not violated at the applicable point(s) of compliance (POC) set forth below or if an AWQS for a pollutant has been exceeded in an aquifer at the time of permit issuance, that no additional degradation of the aquifer relative to that pollutant and as determined at the applicable POC occurs as a result of the discharge from the facility per A.R.S. § 49-244." The permit contains numerous provisions implementing protection of groundwater through (1) mandating establishment of POCs in both the Redwall-Muav and perched Coconino aquifers (Section 2.4), (2) replacement of POC wells in the event of damage or other circumstances (Section 2.5.3.1), (3) establishment of alert levels and aquifer quality limits for the POCs, including an aquifer quality limit for uranium even though uranium does not currently have a numeric aquifer water quality standard (Sections 2.5.3.2, 2.5.3.3, 2.5.3.4, 2.5.3.5, and 4.2, Table 9), (4) quarterly compliance monitoring at the POCs throughout the life of the mine and during post-closure (Sections 2.5.3.6 and 4.2, Table 9), and (5) detailed contingency requirements for exceedances of alert levels and aquifer quality limits at the POCs, including a requirement to consider the cleanup of affected soil, surface water, or groundwater, and mitigation of the impact of pollutants on existing uses of the aquifer in response to exceedances of aquifer quality limits (Sections 2.6.2.3.2 and 2.6.4). Beyond compliance monitoring at the established POCs, the permit requires submittal every two years of a detailed Groundwater Monitoring Demonstration Report (Section 2.7.4.2).

The individual APP contains other additional, redundant protections including, but not limited to: demonstration of Best Available Demonstrated Control Technology ("BADCT") for each of the potential discharging facilities (Sections 2.2 & 4.1, Table 6); discharge limitations (Section 2.3); operational inspections and monitoring (Sections 2.2.4, 2.5.2, 2.7.4, & 4.2, Table 10); contingency requirements in the event of exceedances of operational and post-closure performance levels, discharge limitations, and conditions posing an imminent and substantial endangerment to public health or the environment (Section 2.6); facility closure and post-closure requirements (Sections 2.9 & 2.10); and financial assurance obligations (Section 2.1.3).

While the individual APP contains numerous and redundant provisions to protect against any impacts to groundwater, ADEQ concluded in the individual APP (Section 2.2.2) that "natural hydrogeologic protections" at the Pinyon Plain mine site will on their own prevent any potential impacts to groundwater resulting from mining operations. ADEQ listed these "natural hydrogeologic factors" in the individual APP, and they include:

⁵ See <u>https://static.azdeq.gov/wqd/pinyonplain/2022_minoramend_app.pdf</u>.

- 1. Simple, 'layer cake' geology, the aridity of the site, and structural simplicity are conducive to greater predictability in assessing and controlling potential impacts to the subsurface.
- 2. The southwesterly regional dip of the layered geologic section in the vicinity of the mine directs groundwater flow southwest away from the Grand Canyon coupled with the groundwater divide present between the mine site and the Grand Canyon. A groundwater divide acts as hydrogeologic control and provides an element of natural protection by preventing northward migration of groundwater.
- 3. The demonstrated absence of large geologic structures such as faults, open joints, fractures, or solution cavities that would increase permeability and enhance circulation of water within the subsurface at the Mine site. This conclusion is supported by the ancient age (> 10,000 years) of perched groundwater encountered within the Coconino and of groundwater within the regional Redwall-Muav aquifer beneath the site and is consistent with the measurements of relatively low hydraulic conductivity and transmissivity obtained from hydraulic tests in site wells, and with the conclusions from aerial overflights and field mapping that such features are not present within approximately 2 miles of the site.
- 4. The low permeability of the geologic formation (Moenkopi) directly underlying all surface features of the site which will minimize the potential for any surface impacts to be propagated into the subsurface and protect the Coconino Formation from any potential discharge from surface facilities.
- 5. A significant degree of natural protection exists from thick layers of low permeability rock. Expert examination of mine site drill cores conducted during previous investigations indicate very low permeability and absence of significant secondary porosity, and the examiner's conclusion that no water from the surface has impacted the breccia pipe ores for millions of years.
- 6. The abundance of iron oxide rich sediments throughout the stratigraphic column which have the ability to sorb dissolved metals that may be present in the water.
- 7. A 'double layer' of protection between the bottom of the Mine shaft (the Mine sump) and the regional Redwall-Muav aquifer consisting of:
 - a. Over 200 feet of low permeability Lower Supai Formation (considered a 'confining' unit) that underlies the workings; and
 - b. the confinement of the regional aquifer to the Muav Limestone which is protected, successively, by approximately the upper 90 feet of the Muav; more than 100 feet of overlying Temple Butte Formation; and hundreds of feet of overlying Redwall Limestone. As a result, the Mine workings will bottom in nearly impermeable rock, and will be separated from the regional Redwall-Muav aquifer by at least 500 feet of nearly impermeable rock.
- 8. The near impermeability of the breccia pipe and surrounding rocks beneath the Coconino and the confined nature of the regional Redwall-Muav aquifer, which would essentially prevent any potential contamination originating from site operations from ever mixing into the Redwall-Muav aquifer, due to the hydraulic pressure within the aquifer, and the nearly impermeable rocks capping the aquifer. The rocks capping the confined aquifer are of necessity nearly impermeable otherwise the hydraulic pressure within the aquifer could not be maintained.

Beyond the "natural hydrogeologic factors," EFRI implements additional operational practices at the mine that further ensure protection of groundwater and the surrounding environment. These include: (1) all perched groundwater flows inward towards the mine shaft due to lower pressure; (2) water inflows are collected by water collection rings or the lined shaft sump at the lowest point in the mine workings; (3) the continuous inward flow protects the quality of the perched groundwater adjacent to the shaft; (4) the shaft bottom—where water inflows are collected in a sump—is in very low permeability rock (for extra protection, an impermeable double-liner (poly urea and geosynthetic clay) was installed by EFRI at the bottom of the shaft sump); (5) collected water is continuously pumped to the lined evaporation pond or one of two water storage tanks at the surface of the mine; (6) the evaporation pond at the surface is bermed and underlain by an impermeable, synthetic liner; and (7) the ore pad is lined and designed to drain to the lined evaporation pond in order to prevent any potential ore constituents from seeping into the soil.

Finally, consistent with the USFS-approved Plan of Operations and in conformance with the clean closure requirements in the APP program (see A.R.S. §§ 49-201(5) & 49-252 and A.A.C. R18-9-A209(B)), the individual APP (Section 2.9.1) requires implementation of the USFS-approved Clean Closure Plan for the Pinyon Plain mine. The Clean Closure Plan will be implemented in two phases. The first phase is an initial closure upon completion of mining activities and will include, among other activities, the installation of plugs/seals in the production shaft and vent shaft to prevent any contamination to the C-aquifer or any other groundwater source and extensive rock, soil, and sediment sampling of the site and then proper management of any rock, soils, or sediment exceeding field radiological closure criteria. This first phase will eliminate the potential for any further discharges from the mine and any potential for exceeding aquifer water quality standards at an applicable point of compliance consistent with the definition of "clean closure" in A.R.S. § 49-201(5). The second phase will consist of 30 years of post-closure verification monitoring of the point of compliance wells in the C- and Redwall-Muav aquifers to verify the mine has been properly closed and that there will be no groundwater impacts associated with the mine after closure.

As further protection, at the time of mine closure, the individual APP (Section 2.9.1) requires EFRI to submit an updated and final closure plan for review and approval by ADEQ. At that time, ADEQ will be able to evaluate conditions at the mine and impose additional post-closure groundwater monitoring (and any other appropriate post-closure actions) as necessary to verify that there are no groundwater impacts from the mine after its closure.

Based on the above comprehensive permitting requirements, including the requirement to continuously pump any water that accumulates in the Mine shaft during operations and before mine closure to the surface for evaporation and management, thereby keeping the mine dry during operations, the point of compliance monitoring wells in both the C- and Redwall-Muav aquifers, the shaft plugging and sealing under the Clean Closure Plan, and the post-closure monitoring under the Clean Closure Plan, no impacts to groundwater are expected during operations or after final closure. There is no reasonable probability that a pollutant from mining activities will reach an aquifer, even without accounting for the natural protections at the site. When considering the "natural hydrogeologic protections" at the Pinyon Plain mine, which the ADEQ has concluded will on their own prevent any potential impacts to groundwater resulting from mining operations,

together with all the added protection in the individual APP, there is virtually no chance that a pollutant from mining activities will reach an aquifer, and if a pollutant were to reach an aquifer, such an event would be detected by operational and post-closure monitoring and remediated under the contingency plans in the permit and the remediation requirements in the USFS-approved Clean Closure Plan.

The Pinyon Plain mine has not sprayed toxic water impacting plants and animals.

The Havasupai Tribal Council alleges in its January 11th statement that "digging the mine shaft" led EFRI to "spray[] toxic water into the air, only to be spread to the precious plants and animals by the blowing winds." These allegations are misleading and untrue.

In contrast to the council's allegations, EFRI proactively began using enhanced evaporation measures in early 2017 in response to encountering perched groundwater from the C-aquifer in late-2016 and heavy precipitation events during the winter of 2016-2017. Encountering perched groundwater from the C-aquifer was expected and contemplated under the site's approved USFS Plan of Operations and underlying environmental analyses and under prior and current APP permit coverage at the site. For example, EFRI was required under its Type 3.04 general APP authorization to pump all groundwater encountered in the mine shaft to the lined impoundment at the surface of the mine and it conducted its proactive enhanced evaporation measures within the lined impoundment.

EFRI initially used upward-pointing Land Sharks for the evaporation, which are commonly used in the mining industry. The Company also installed wind-speed monitors on the Land Sharks to automatically shut them off when winds exceeded 20-25 mph, to prevent any potential drifting of mist. If there was any potential migration of mist, it was not measurable and did not impact any plants or animals. In any event, any potential limited impacts will be addressed by the soil mitigation requirements imposed under the site's air permit and the USFS-approved Clean Closure Plan. The Land Sharks were replaced in February 2019 by more modern and efficient, downward pointing Apex 2.0 evaporative units, which practically eliminated the drifting of mist.

The transportation and radiological risk associated with ore haulage has been reviewed by federal and state agencies, is not considered "significant," and will not result in "a whole set of unknown and new problems."

The Havasupai Tribal Council asserts in its January 11th statement that a "whole set of unknown and new problems will exist when the company begins transporting uranium over the land." This assertion is false and misleading. The transportation and radiological risk associated with ore haulage from the Pinyon Plain mine to the White Mesa Mill in Southern Utah was analyzed as part of the USFS's approval of the Plan of Operations. This analysis considered the type and number of haul trucks, the type of ore material being hauled, potential accident scenarios, and potential radiation doses to occupational personnel (*i.e.*, truck drivers) and the public. In summary, as described in Appendix E, Radiological Assessment, of the USFS's Final Environmental Impact Statement ("FEIS"), "Ore transport to the mill will not expose inhabitants along the haulage route to any statistically significant doses of radiation." In addition, during a recent renewal of the Class

II air quality permit for the mine through the ADEQ, EFRI agreed to the addition of air pollution control requirements for haul trucks that include commitments to "operate and maintain the haul trucks in such a way that ore cannot escape through any slits or openings in the bed of the truck" and to cover haul trucks "with a tarpaulin to prevent loss of material in transit, so that haul road emissions will result exclusively from natural dust on the road surface."

EFRI recognizes that safe transportation of ore from the mine to the mill is paramount, and, accordingly, remains firmly committed to ensuring that all haul trucks used for ore haulage meet all regulatory and permitting requirements, including all marking, labeling, and placarding requirements of the U.S. Department of Transportation. As noted above, haul truck loads will be tightly covered with a tarpaulin such that ore cannot escape through any slits or openings in the truck bed. Thus, wind action and uneven roads will not cause loss of material during transit. EFRI has a transportation policy in place with regard to personnel training, vehicle marking, labeling and placarding, preparation of shipping papers, radiation control and, in the unlikely event of an accident that causes spillage of ore material, emergency response actions that the company and/or contractors will take to ensure immediate cleanup of any spilled material and notification to the appropriate federal, state and tribal authorities.

The Pinyon Plain mine creates no health or other risks to visitors of the Grand Canyon.

The Havasupai Tribal Council asserts wildly that "millions of people will now be forced to pass by an active uranium mine on their way to the majestic Grand Canyon" and everyone "should be able to freely experience this natural wonder without risking their lives." These defamatory statements are patently false.

First, the Pinyon Plain mine is located approximately nine miles from the nearest rim of the Grand Canyon itself, ten miles from the Grand Canyon Village in the National Park South Rim Visitor Center, roughly six miles south of the nearest boundary of the National Park, and several miles from any of the main entries or roads into the park. No one visiting the park will be able to see the small footprint of the mine located miles from the National Park on lands managed by the USFS. Even if someone were to drive to the fence line of the mine on USFS roads, or even stay there for an extended period, they would not experience any adverse health effects of any significance.

Second, all the environmental reviews conducted for the comprehensive permitting for the Pinyon Plain mine have concluded that the operation of the mine will have *no* impact on the Grand Canyon National Park, its visitors, area residents, or groundwater or springs associated with the park. This includes the transport of uranium ore on public highway, which is carefully regulated by the U.S. Department of Transportation. Because state and federal authorities understand the low level of hazard associated with uranium ore, covering uranium ore with a tarp during transport is sufficient to meet all applicable laws and regulations and to address all safety and environmental concerns. It should be noted that trucks routinely haul liquids and other materials on public roads and highways that are orders-of-magnitude more dangerous and hazardous than uranium ore, including gasoline, diesel, and other materials that are regularly transported to Tusayan and South Rim National Park facilities.

The January 29th letter to Governor Hobbs not only relies on the demonstrably false allegations from the Havasupai Tribal Council but makes other unsubstantiated claims that have been proven repeatedly to be without any merit.

As they did when submitting comments on the individual APP issued to the Pinyon Plain mine in April 2022, the environmental organizations make broad and unsubstantiated assertions in their January 29th letter that demonstrate a misunderstanding or misrepresentation of the individual APP issued to the mine and its robust conditions that will protect groundwater during operations and after closure. Even more egregiously, the assertions evidence a lack of understanding of the specific site conditions at the Pinyon Plain mine and, based on that lack of understanding, attempt to raise speculative issues or concerns that are inconsistent with the actual conditions or potential environmental risks posed by the mine.

For example, in the first paragraph of the letter, the crafters of the January 29th letter reference the Biden Administration's recent and controversial designation of one million acres of USFS and BLM land surrounding the Grand Canyon National Park (including the area encompassing the location of the Pinyon Plain mine) as a national monument to support its request that Governor Hobbs ignore Arizona statutes and regulations and take unprecedented action to undo valid existing mining rights and related permit actions that EFRI and its predecessors have lawfully secured over the last 35+ years. EFRI alone has invested tens of millions of dollars in construction and permitting costs related to the Pinyon Plain mine – which is a highly regulated, state-of-the-art facility that is fully protective of public health, safety, and the environment and sets the world standard for modern, sustainable underground uranium mining. EFRI (and its predecessors) have also spent millions of dollars in legal and other related expenses supporting federal government agencies in numerous federal lawsuits, affirming the mine's approvals, permits, and valid existing rights, including two cases before the 9th Circuit Court of Appeals. What the environmental groups fail to mention is that the Biden Administration made the following clarifying statement regarding the status of the Pinyon Plain mine when it issued its national monument designation:

The national monument designation recognizes and respects valid existing rights. The proclamation specifies that maintenance and upgrades to water infrastructure for flood control, utilities, water district facilities, wildlife water catchments, and other similar uses may continue; and that utility lines, pipelines, and roads can continue to be maintained, upgraded, and built consistent with proper care and management of the monument objects. Existing mining claims – predating a 20-year mineral withdraw initiated in 2012 – will remain in place, and the two approved mining operations within the boundaries of the monument would be able to operate.

Fact Sheet: President Biden Designates Baaj Nwaavjo I'tah Kukveni – Ancestral Footprints of the Grand Canyon National Monument (Aug. 8, 2023).⁶

⁶ See <u>https://www.whitehouse.gov/briefing-room/statements-releases/2023/08/08/fact-sheet-president-biden-</u>designates-baaj-nwaavjo-itah-kukveni-ancestral-footprints-of-the-grand-canyon-national-monument/.

The Pinyon Plain mine is one of the two approved mining operations within the boundaries of the monument that the Biden Administration stated would be able to operate. It would not be appropriate for the State of Arizona to undo what was explicitly recognized by the Biden Administration, despite the recycled, unsubstantiated claims and allegations that have been proven over and over to be without any merit.

After citing to the erroneous allegations from the Havasupai Tribal Council to support their request for undoing lawful permit actions, the environmental organizations then start to weave their own litany of misrepresentations and false assertions at the bottom of page 2 and continuing through page 4 of the January 29th letter. This portion of the letter makes the same overbroad allegations regarding the potential of the mine operations to impact groundwater that have been rejected for decades now. These allegations attempt to use self-serving studies that are general in nature and are not specific to the natural geology and site conditions existing at the Pinyon Plain mine. The presence of the natural site conditions at the mine have been demonstrated and confirmed for decades to be protective of groundwater and any aquifers underlying the mine. Such broad allegations also ignore the robust and redundant protections against any off-site impacts to groundwater imposed under the individual APP as outlined earlier in this letter.

EFRI responded to these and other similar allegations in its "Technical Response to Comments from Activist Groups" that it submitted to ADEQ on April 21, 2022. Before responding in detail to these allegations, EFRI's April 21, 2022 technical response stated the following on page 15 in response to comments submitted by Dr. David K. Kreamer on behalf of the Activist Groups. This summary applies directly to the repeated unsupported allegations contained in the January 29th letter to Governor Hobbs, including the letter's references to general studies from 2020 and 2023 that have no real relevance to any potential of the Pinyon Plain mine to impact groundwater.

"In general, most of Dr. Kreamer's assertions are not based on site-specific conditions and are therefore speculative with regard to the conditions at the mine site. For example, as discussed below, he points out that confining units may be fractured and permeable; such may be the case where major structures are located, however detailed examination of the mine site shows an absence of such structures and fracturing. One of his assertions, that the Hermit Shale and Lower Supai are fractured and permeable at the site is refuted by the presence of ancient (>10,000-year-old) Coconino water perched on the Hermit Shale; and by the nearly 150 psi of hydraulic pressure that exists in the R-Aquifer [Redwall-Muav aquifer] at the site. If the Hermit were fractured and permeable the ancient perched water could not exist; and if rocks overlying the R-Aquifer were fractured and permeable the large hydraulic pressure in the R-Aquifer could not be maintained. In addition, the very presence of the 200-million-year old orebody and of ancient water in the Coconino refute Dr. Kreamer's assertion that the breccia pipe is fractured and permeable; if such were the case the orebody would have dissolved away long ago and the water in the Coconino would have leaked away. Furthermore, even in a general sense, most (if not all) of his assertions are inconsistent with or directly contradict the findings of the detailed site-specific investigation performed by Errol L. Montgomery and Associates (ELMA); and with the findings of the vast majority of reports prepared by the USGS and other federal agencies such as the USFS and BLM (in particular the FEIS -BLM [2011] and Bills et al [2016])."

In summary, the January 29th letter is based on demonstrably false statements from the Havasupai Tribal Council as well as on recycled groundwater impact arguments that have been found to be without any basis in fact or law.

Based on the above, and the entire 35+ year administrative and legal record supporting the Pinyon Plain mine and its lack of any groundwater or other negative impacts, EFRI encourages ADEQ (and the Governor's office) to continue to recognize the fully permitted and protective status of the Pinyon Plain mine. EFRI respectfully requests that ADEQ (and the Governor's office) should not in any way entertain the unlawful and politicized request in the January 29th letter to revisit or reopen the individual APP.

Very truly yours,

GALLAGHER & KENNEDY, P.A.

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D. Lee Decker

Cc: The Honorable Katie Hobbs Karen Peters, ADEQ, Cabinet Executive Officer & Executive Deputy Director Randy Matas, ADEQ, Deputy Director for Water Quality Division Nicole Branton, Kaibab National Forest, Supervisor Mark Chalmers, EFRI, President & Chief Executive Officer David Frydenlund, EFRI, Executive Vice President & Chief Legal Officer