To: The Honorable Alan Lowenthal, Chairman, House Subcommittee on Energy and Mineral Resources
The Honorable Rep. Diana DeGette
Members of the House Subcommittee on Energy and Mineral Resources

From: Nicole Horseherder

Date: June 30, 2021

Re: Responses to Follow-up Questions from the Subcommittee's June 15, 2021 Oversight Hearing on "Environmental Justice for Coal Country: Supporting Communities Through the Energy Transition."

Dear Chairman Lowenthal, Rep. DeGette and members of the House Subcommittee on Energy and Mineral Resources:

First, thank you once again for allowing me to provide testimony earlier this month on the critical issue of "Environmental Justice for Coal Country: Supporting Communities Through the Energy Transition." I am grateful for the opportunity to bring to your attention issues that have been plaguing the Navajo and Hopi Tribe for decades. Time is of the essence in addressing reclamation and the restoration of our vital groundwater resources. As noted in written testimony I filed jointly with former Hopi Tribal Chairman Ben Nuvamsa, Black Mesa Mine has been closed for 16 years and Kayenta Mine for almost two years. Yet, the return of tens of thousands of acres of our land and restoration of the only viable source of drinking water that we have to Navajo and Hopi in "as good condition as received," is lagging woefully behind in both timing and quality.

The federal government, through the Office of Surface Mining, Reclamation and Enforcement (OSMRE), has a trust responsibility to ensure that reclamation proceeds in a timely fashion and that the work meets standards that will allow our people to once again return to land that was inhabited for countless generations until our ancestors were forcibly removed to make way for coal mining on Black Mesa. Ongoing delays in reclamation and groundwater restoration increase the odds that our tribes will lose any chance of making that happen. OSMRE is in the process of reviewing applications by Peabody Western Coal Co. to return bonding and terminate the company's reclamation obligations on thousands of acres that do not meet the bare minimums necessary for a return of the land to our people. If approved, this will forever preclude making sure the job gets done right on portions of Kayenta Mine. It will leave land uninhabitable and all but unusable, and most importantly, it makes it all the more likely that the only source of drinking water we have on Black Mesa will remain permanently damaged.

It is noteworthy that OSMRE's site inspection for these applications took place on June 15, the same day as the Subcommittee's oversight hearing. We found out about this site inspection on a Saturday, just three days before, making it impossible to attend in person as allowed under the

Surface Mining Control and Reclamation Act. Whether coincidental or not, this inaccessibility to basic information is yet one more example of the difficulties we face in ensuring a proper reclamation and creating a meaningful platform for community engagement in the process.

Below are my responses to follow-up questions submitted by Chairman Lowenthal and Rep. DeGette. I hope that my answers help affirm the need for oversight action by Congress in ensuring that OSMRE carries out its trust responsibilities to our peoples.

Questions from Chairman Lowenthal:

1. **Can you tell us more about the importance of clean water and this aquifer to your community?**

A. It is not hyperbole to say that there is no more important resource than water to the future of both the Navajo Nation and Hopi Tribe and our continued existence on Black Mesa. We have a saying in Diné: “Tó iiná áté.” “Water is life.”

Without the Navajo Aquifer (N-Aquifer), our lives, our communities, our cultures, our entire existence on Black Mesa is not possible. Our ancestors thrived in this region for countless generations before coal mining started in the late 1960s. The pristine, Ice Age groundwater in the N-Aquifer fed springs and seeps that nourished our crops, provided for wildlife and were plentiful enough to sustain our cultures for centuries.

All of that has changed in the past 50 years. Black Mesa and Kayenta coal mines were allowed to consume up to 3.4 million gallons of water a day between them – eight Olympic-sized swimming pools every single day for more than three decades while both mines were operating together. When Black Mesa Mine closed and Peabody’s mining cut water consumption by more than two-thirds – to around 500 million gallons a year – some of the water wells around the mines started to stabilize. But that matters little. By then, the damage had been done. Water in some wells is now 100 feet below where it was when mining started. This has caused material and likely permanent damage to the aquifer, and thus to everything that depends on the life-sustaining water it provided.

As I noted in my testimony, springs and seeps that my family once relied on have dried up. At one time, Navajo sheep and livestock herders could water their animals by digging down just a few feet to get to groundwater. That is impossible now because of the harm done to the aquifer. To Navajo, corn is sacred and untold generations grew it readily on Black Mesa using agricultural techniques passed down from one generation to the next. Now, our corn hardly grows at all. In many years, crops fail entirely. This is more than just lost sustenance. It is a direct assault on our way of life, our culture and spiritual ceremonies.

The N-Aquifer is our only source of potable water, and it is 2,000-3,000 feet underneath the surface, yet the natural fissures in the earth once brought this water to the surface for us and all life to drink. It is extremely expensive to drill wells into the deep aquifers. No one who lives on the plateau can afford this. Many Navajo lack running water in their homes. They must rely on wells drilled by the local utility at a central location at each community government center, usually the Chapter House. This amounts to one well per community of several hundred families. Every week, we must travel 20-40 miles round-trip to these community wells to fill tanks hauled on trucks or towed behind cars. Currently, the well at the Hardrock Chapter House (where I am a member) is broken again. This is the second time in a five-week period that the well has been unavailable. But merely drilling more wells will not solve the problem today. What is needed is to allow the aquifer time to recover. Years of pumping has left it depleted and depressurized.

During COVID, this lack of regular access to clean water has been a major factor in exacerbating the effects of the pandemic. At one point near the height of the outbreak, the Navajo Nation had a higher per capita rate of infection than any state in the nation.[1]

Water is life. A healthy N-Aquifer is critical to our continued existence on Black Mesa, and Peabody and OSMRE must be held accountable for returning to us the most basic and necessary of resources.

2. **What is the status of the aquifer now? Does your community have the tools it needs to hold Peabody Coal accountable for damage to your drinking water? How can the federal government be helpful?**

A. As of the closure of Kayenta Mine in August of 2019, over 50 billion gallons of pristine drinking water had been consumed to support operations at Black Mesa and Kayenta Mines. Many springs and seeps were mined over in the lease area. And as I noted, with the N-Aquifer damaged, other seeps and springs across Black Mesa simply have dried up and stopped producing water.

The N-Aquifer was pumped for nearly 50 years by Peabody Western Coal Co. to support the corporation's two mining operations on Black Mesa. U.S.Geological Survey (USGS) data and reports clearly show the decline in aquifer levels in monitoring wells, as well as decreased wash and spring discharge for over 20 years now.

> *"[M]onitoring data show that the water levels in those wells have periodically dropped below not only the CHIA (Cumulative Hydrologic Impact Analysis) criteria level established to protect the aquifer, but the*

[1] "Navajo Nation reports more coronavirus cases per capita than any US state," The Hill. May 11, 2020. https://thehill.com/policy/healthcare/497091-navajo-nation-has-more-coronavirus-cases-per-capita-than-any-us-state

elevation of the top of the N-aquifer itself. This adds additional concerns regarding potential material damage to the N-aquifer. The failure of these wells to meet the criterion is dismissed by OSMRE as being the result of municipal pumping in the Kayenta community, even though the total municipal pumping at Kayenta represents less than 12 percent of the industrial pumping by (Peabody Western Coal Co.)"

– Assessment by consulting firm LFR of potential hydrologic impacts to the N-aquifer caused by groundwater withdrawals associated with Peabody Western Coal Company (PWCC) mining operations in the Black Mesa area. September 2000.[2]

The conclusions in that analysis about damage to the N-Aquifer were reached ***two decades ago***. The situation has only deteriorated since then, with nearly two decades of additional mining and water depletions compounding the problem. And OSMRE has been complicit in allowing the problem to grow. As noted in my written testimony, this is done mainly through the use of "modeling simulations" rather than real world data, which allows Peabody and OSMRE to mask the true impacts of mining, blaming them instead on domestic use by Navajo and Hopi communities living on Black Mesa, even though domestic use is a fraction of the water consumed by coal mining. The LFR analysis highlights this subterfuge:

"OSMRE relies on groundwater modeling rather than physical monitoring to assess whether material damage is occurring, and has determined that material damage has not occurred. It remains unclear how a conclusion can be made that no material damage is evident based on simulated modeling results while physical monitoring data suggests otherwise."

In fact, throughout the history of the agency's oversight on Black Mesa, it has consistently downplayed all significant drawdown of the N-Aquifer with statements to the effect that "groundwater model simulations have demonstrated that drawdown from mining withdrawals does not reach this area." Instead, its "model simulations" spit out results blaming depletions on domestic use by tribal communities.

Real-world data challenges the modelling, and when that happens OSMRE and Peabody simply move the goalposts. OSMRE gets to define how "damage" is defined, determine what the damage thresholds are and determine the source of any changes when they're observed. Over the past three decades, for example, OSMRE has used at least four completely different sets of material damage criteria; they have changed their own definition for "material damage to the hydrologic balance" three times, and they have changed the cumulative impact areas three times – in such a way that springs were eliminated from oversight.

---

[2] "Drawdown: An Update on Groundwater Mining on Black Mesa." Natural Resource Defense Council. March 2006. https://www.nrdc.org/resources/drawdown-update-groundwater-mining-black-mesa

Peabody has spent millions of dollars developing the groundwater model that it uses to dismiss the impact of mining on the N-Aquifer. This three-dimensional model simulates the geology across thousands of square miles and to a depth thousands of feet below the surface. Details about much of Black Mesa's geology are unknown, and when that happens, the simulation simply fills in the holes with pretend geology that make it extremely easy to hide uncertainties and generate the desired results. It is common practice for modelers to invent "geological formations" in models that do not actually exist in the real aquifer as a means of getting a model to simulate real-world conditions. Or as Peabody states in its own modeling report about four such geologic zones, "although there is no evidence that these four geological zones exist in the actual N-aquifer, the model could not be successfully calibrated without them. The model now replicates real-world observations to an acceptable level of accuracy."

Acceptable to whom?

The federal government helps further hide the true nature of N-Aquifer damage by reducing budgets allocated to USGS for monitoring the N-Aquifer. Since 2005, funds budgeted for monitoring have been cut back. Thus, the federal government, through OSMRE, has allowed the depletion, depressurization, contamination and damage of the only source of potable water on Black Mesa, with no plan for alternative sources of water or any plan to address the damage done by mining. Currently, residents don't know if their ground water is reliable, whether it is safe to drink and if it will recover from the damage inflicted by mining. If it does recover, we have no idea how long it will take before the springs and seeps are able to produce water again.

While the Surface Mining Reclamation and Control Act (SMCRA) requires Peabody to post bonds to ensure that there are financial resources available for reclamation of the land, our water has never been bonded by Peabody. Reclamation for the water is not part of Peabody's reclamation plans – which themselves have not been updated for more than 30 years – and it should be. Peabody, with OSMRE's assistance, is leaving our only water sources less accessible and unreliable.

The solution to all of this, of course, is to require OSMRE to simply do what's required by the law and determine that the closure of Kayenta Mine mandates a significant revision to the mine permit at Kayenta as part of the permit renewal process, which is now a year overdue. A significant mine permit revision will allow all factors of the Peabody's reclamation to be considered, including the impact of mining on vital groundwater supplies. It should require an independent third-party to conduct an comprehensive review of data and determine – outside the scope of Peabody's proprietary "model" – the connection between a half century of massive mining-related withdrawals and the impact on the aquifer. Once that connection is established beyond the common sense that already exists, then we can begin to talk about solutions that include recharge of the

aquifer and provision of alternative water sources to the communities and people that have been impacted.

Question from Rep. DeGette:

The state of Colorado recently created an Office of Just Transition and an action plan to help coal communities and workers move towards a more prosperous future. Rep. DeGette will soon be reintroducing a Clean Energy Innovation and Deployment Act, which includes an Energy Workforce Training and Transition Title, based in part on the Colorado Just Transition Law. The energy workforce title of the DeGette bill includes several measures to promote access to jobs in the modern energy economy, especially for workers in transition. Much like the Colorado law, it will create a new DOE Energy Workforce Transition Office to identify existing resources for displaced energy workers and communities. It will also provide financial and technical assistance to states to develop energy plans that address workforce and economic transition, and establish apprenticeship, workforce placement, and university leadership programs.

3. **Would programs like those that would be established by the DeGette bill be helpful, or have been helpful, to the workers and communities in energy-related transitions that you have observed? Please refer to specific measures of the DeGette bill, as described in Attachment A, that you believe would be helpful; more helpful with some revision; or not helpful.**

A. Thank you for the opportunity to address coal community transition. As you are probably aware, the closure of coal-fired power plants and mines has had – and will have – a disproportionate impact on tribal communities. The closure of Navajo Generating Station and Kayenta Mine in 2019 slashed tens of millions of dollars from the budgets of the Navajo and Hopi governments. Navajo lost more than 20 percent of its annual revenue and the Hopi around 85 percent. These cuts have significant impacts on our governments' ability to provide basic services like police and fire protection, social services and education. Yet, to date, not a single dime has been directly provided by the utility operators of NGS or by Peabody Coal with the specific intent of assisting our two tribes with Just and Equitable Transition to post-coal economies.

   In response to your proposed federal legislation, I provide the following proposed recommendations as a starting point for revising the measure.

   Title V: In addition to States, specifically include federally recognized Tribes as recipients of "financial assistance" meant to develop individualized Energy Plans.

   Section 501. Reword this section to specifically include Tribal Energy Plans in addition to State Energy Plans throughout.

Section 512. Establish a Tribal subsection within the proposed Energy Workforce Transition Office and Advisory Council.

Section 513. As part of any notification by owners and operators of energy-related facilities in the process of closing, required consultation with and notification of any Tribal governments representing affected communities.

Section 522. Within the proposed nationwide program to improve education and training for jobs in energy-related industries, create a subsection specifically dedicated to assisting workers from federally recognized Tribes.

Section 523. Within the Zero-Emissions Economy Workforce Pilot Programs created collaboratively between the Dept. of Labor and Dept. of Energy, establish a specific Tribal pilot program to provide competitively awarded cost-shared grants to eligible Tribes.

Section 524. Within the proposed University Zero-Emissions Energy Leadership Program, establish scholarships, fellowships, and research and development projects specifically for tribal technical institutions.

Outside the scope of this legislation, I'd also like to highlight one additional area in which Congress and the federal government can provide much-needed assistance. Clean energy development on tribal lands is increasingly being floated as one solution to the economic dislocation that results from coal plant and mine disclosures. I do not disagree with this premise, but the devil is in the details. Simply replacing coal with another resource, even if it's wind or solar, just replicates the dynamics of colonization and exploitation, in which the resource is developed, owned and operated by outside interests with token "fees" paid directly to the tribes and the power shipped off elsewhere. This is not a step forward.

For true progress, we need to see benefits directly accruing to the impacted communities through means such as partial ownership, revenue sharing, job creation, and increased access to electricity by impacted communities. These "community level benefits" are crucial in moving beyond the old system. And through its regulatory mandate, the federal government can help ensure that any clean energy projects developed on tribal land include benefits to those hit hardest by transition. We would be happy to continue a dialog with you about ways in which agencies such as the Dept. of Energy, Bureau of Reclamation, Western Area Power Administration, Bureau of Indian Affairs, and others can collaborate on helping develop a lasting framework for community level benefits.

Again, I am grateful for the opportunity to testify before the Subcommittee and provide this additional requested information. Issues related to reclamation and the restoration of

our groundwater are urgent, with OSMRE now actively considering applications by Peabody to permanently relinquish the company for any further clean-up obligations on thousands of acres. I again implore the Subcommittee to assist in our efforts to make sure this work is done properly and our land and water returned to us in a condition that will allow the Navajo and the Hopi to once again call it home.

Sincerely,

Nicole Horseherder
Executive Director
Tó Nizhóní Ání