

Joint Testimony of Nicole Horseherder¹ and Ben Nuvamsa²

Submitted to the House Subcommittee on Energy and Mineral Resources, Oversight Hearing on “Environmental Justice for Coal Country: Supporting Communities Through the Energy Transition”

June 15, 2021

Introduction

Chairperson Lowenthal, Ranking Member Stauber, and members of the Subcommittee, we are grateful to the House Subcommittee on Energy and Mineral Resources for the opportunity to tell you about the current circumstances on Black Mesa and how negligence in the reclamation of thousands of acres of land damaged by coal mining and in the restoration of a depleted vital water supply pose existential threats to the future of thousands of Navajo and Hopi people who call this sacred place home.

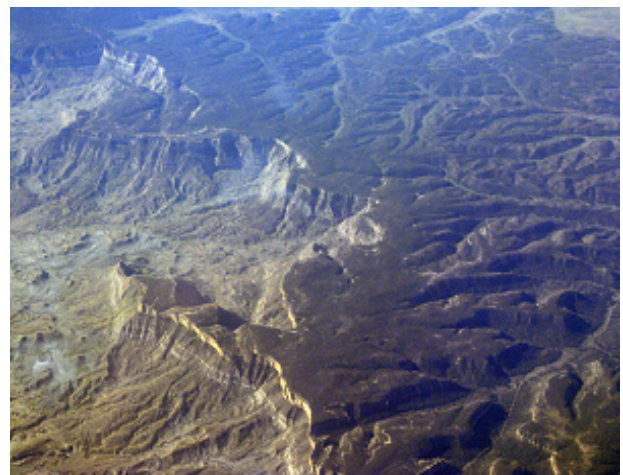


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Black Mesa is a distinctive geographic plateau rising a thousand feet from the surrounding terrain and encompassing around 3,300 square miles spanning parts of both the Navajo and Hopi Indian reservations in northern Arizona. It has been home for countless generations to members of both tribes and their ancestors.

Coal mining on Black Mesa began in the 1960s after deposits of high-quality, sub-bituminous, low-sulfur coal were discovered during the western buildout. From 1968 through 2019, around 500 million tons of coal were mined by Peabody Western Coal Co. from two massive strip mines located on 65,000 acres of tribal lands leased within the boundaries of the Hopi Tribe and the Navajo Nation. The smaller Black Mesa Mine sits to the southwest and the larger Kayenta Mine encompasses two pits, one

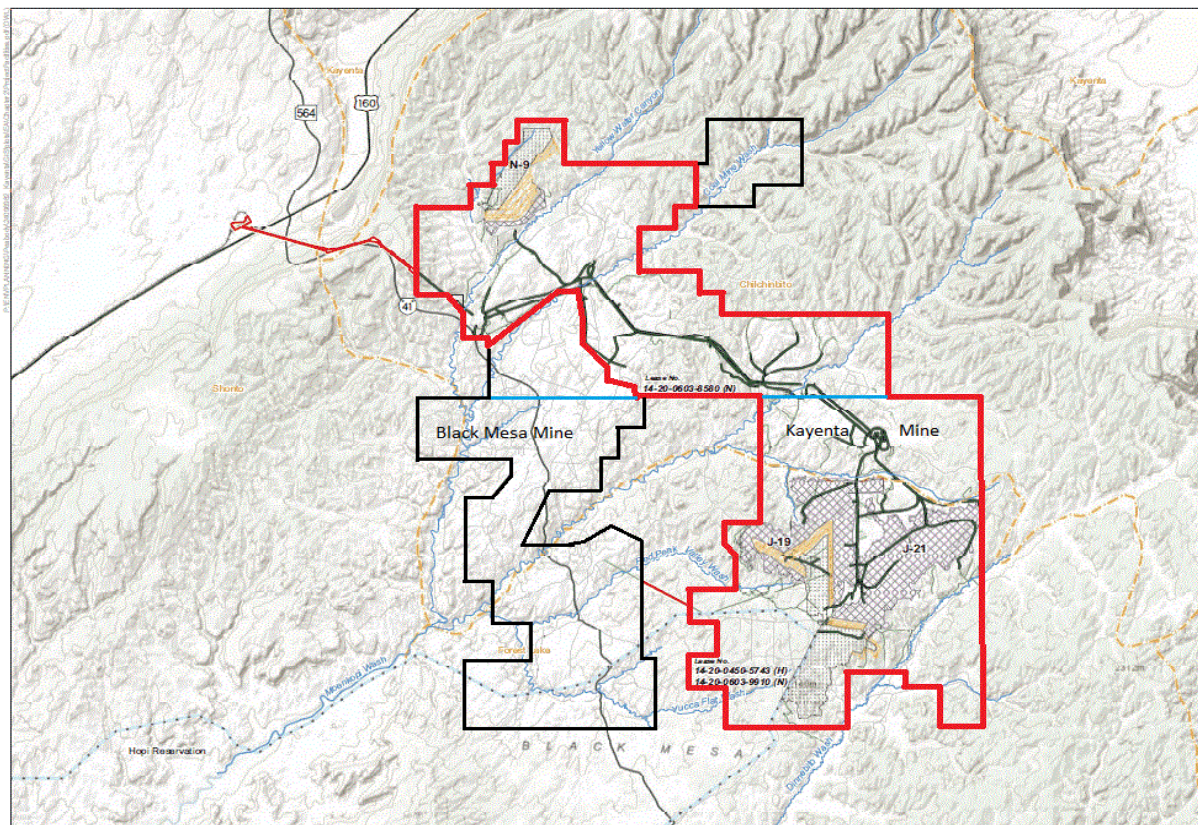
¹ Nicole Horseherder, a lifelong resident of Black Mesa, is a founder of the Navajo grassroots community organization Tó Nizhóní Ání (Beautiful Water Speaks).

² Ben Nuvamsa served as Chairman of the Hopi Tribe from 2007-2009 and spent 35 years as a civil servant with the federal government, 28 of them with the Bureau of Indian Affairs, including as Superintendent of the Fort Apache Agency.

to the northwest and the other to the southeast. Between the two, about 25,000 acres are situated exclusively on Navajo land, and about 40,000 acres stretch across land jointly held by Hopi and Navajo.

Black Mesa Mine opened in 1968 and supplied around 4 million tons of coal annually to Mohave Generating Station, 273 miles away near Laughlin, Nevada. The coal was transported to the mine in slurry form via a pipeline. To make the slurry, around 3 million gallons of water per day (1.5 billion gallons or 4,600 acre-feet per year) was pumped from the pristine Navajo Aquifer (N-Aquifer), the main source of groundwater on Black Mesa. The power plant and mine both closed in 2005.

Kayenta Mine was opened in 1973 to supply coal for Navajo Generating Station (NGS) near Page, Arizona, which until its closure two years ago was the largest coal-burning power plant in the Western United States. The mine supplied around 8 million tons a year to the plant's three 800-megawatt units, pumping around 1,500 acre-feet of water a year from the N-Aquifer to support operations. The owners of NGS, which include the U.S. Bureau of Reclamation, decided to close the plant in February 2017 based on its inability to compete economically against more affordable sources of power. Kayenta Mine closed in August 2019, three months before the last of the NGS units powered down.



With mining activity now ended after 50 years of coal development, both mines should be well on their way to being returned to the Navajo and the Hopi in “as good condition as received,” as required by Peabody’s leases with the two tribes. To date, however, the federal Office of Surface Mining, Reclamation and Enforcement (OSMRE) is failing miserably in its mandated trust responsibilities to the two tribes to ensure that reclamation activities are carried out adequately and in a timely manner. Our lands are being left scarred and the pristine aquifer that residents of Black Mesa rely on for water has been damaged, possibly irreparably.

Our appearance today before the House Subcommittee on Energy and Mineral Resources is an entreaty to Congress for help in securing accountability for proper reclamation on Black Mesa and the return of our land, our water, and our cultural resources in “as good condition as received.” Among other actions, we are requesting that this Subcommittee use its oversight authority to require the federal Office of Surface Mining, Reclamation and Enforcement (OSMRE) to follow the letter of the law by designating the closure of Kayenta Mine as a significant mine permit revision, which will facilitate the type of interagency coordination and public engagement that is necessary to do reclamation right.

Coal’s Shameful Beginnings on Black Mesa

The sordid history of occupation, oppression and exploitation of Hopi and Navajo is as long as that of the United States itself, and the discovery of significant coal reserves on Black Mesa gave outside forces, including the federal government, yet one more reason to conspire against our two tribes. In order to gain access to the coal lying beneath tribal lands, as well as valuable reserves of oil, gas and uranium, energy developers worked hand in hand with power-broker politicians, PR firms and the federal government to orchestrate a decades-long strategy meant to fabricate tension between the Navajo and Hopi.

This scheming included a complete ban, imposed in the 1960s, on any kind of tribal development – called the Bennett Freeze – across more than a million acres of land jointly occupied by both the Navajo and the Hopi. It included a duplicitous attorney hired by the Hopi Tribe but working secretly for Peabody. It created token governments that signed lopsided deals with the Navajo and Hopi, paying our tribes pennies on the dollar for land leases, coal royalties and water. And it culminated in 1974 with the passage of the Navajo-Hopi Indian Land Settlement Act of 1974, which forced the removal and relocation of ten thousand Navajo and a hundred Hopi from their ancestral homes on Black Mesa. The Act was sold as a “solution” to the long-standing “dispute” between

Navajo and Hopi. In reality, the tension was manufactured by corporate interests to gain access to the valuable coal and other energy resources that lie beneath Black Mesa. As one observer noted, “rather than employing military force, the federal government undertook a war of attrition designed to destroy the peoples' ability to remain on the land.”³

The coal leases developed by the federal government placed the tribes at a considerable economic disadvantage. Ten-year coal leases gave Peabody exclusive access and rights to subsurface minerals that prohibited any access and use of the coal by the tribes, at \$1 per acre. Precious groundwater was sold at “the laughable rate of \$1.67 per acre-foot,” according to renowned Western scholar Charles Wilkinson,⁴ when the fair market value at the time was more than 100 times that. And the coal royalty rate paid to the tribes was 3.3% of gross sales, while the federal rate for coal mined from other federal leases paid four times that amount.⁵

Yet, even with such glaring deficiencies in the deals for our tribes, the revenue streams generated by the plant and mine were so substantial that it was all but impossible for our tribal governments to turn away from them, which created a half-century of economic over-dependence on coal. That created a striking dichotomy, with the official power structure of our tribes, at least until very recently, in strong support of coal but a majority of people living in communities who suffered the continued colonization of tribal people and resources squarely against it.

Reclamation Deficiencies

A half century of coal mining and water withdrawals by Peabody have left considerable damage across the two mine sites that still remains unaddressed years after closure. Material damage includes: (1) impacts to the Black Mesa ecosystem and regional air quality; (2) damage to thousands of surface acres; (3) over-pumping of the N-Aquifer and damage to streams, springs, and the watershed that are connected to it; (4) deterioration of water quality; (5) removal and destruction of ancestral burial sites and remains, funerary objects, cultural artifacts and sacred sites; and (6) impacts on the economy of both tribes and outlying towns and communities.

Black Mesa Mine closed down more than 15 years ago, yet the deep scarring from the mine's nearly four decades in operation is still readily apparent. The mine was permitted prior to the 1977

³ See “An Historical Overview of the Navajo Relocation,” Cultural Survival Quarterly Magazine. September 1988. <https://www.culturalsurvival.org/publications/cultural-survival-quarterly/historical-overview-navajo-relocation>

⁴ “Home Dance, the Hopi, and Black Mesa Coal: Conquest and Endurance in the American Southwest,” Brigham Young University Law Review. 1996. <https://digitalcommons.law.byu.edu/cgi/viewcontent.cgi?article=1903&context=lawreview>

⁵ Ibid.

passage of the Surface Mining Control and Reclamation Act (SMCRA), so it is exempt from modern clean-up regulation, but these so-called “pre-law” lands are nonetheless subject through leases with the Navajo and Hopi to standards requiring, as noted previously, that Peabody return of the land to the tribes in “as good condition as received.” And Peabody is falling woefully short. The Bureau of Indian Affairs, which oversees the land leases on behalf of the tribes, noted major deficiencies with reclamation that were clearly evident 10 years after the mine closed:

*“Today, reclamation on pre-law lands remains inconsistent and often unacceptable, with considerable acreages remaining as raw ungraded and eroding spoil piles, largely void of vegetation. On other areas where spoils have been rough graded, these acreages were not topsoiled to promote revegetation and/or were not backfilled/graded in a manner that allowed suitable plant growth material to be present on the surface. These practices have minimized the potential for the mined landscape to be left in a manner defined as being “as good condition as received.” Some of these acreages have been idle for many years, having prominent “moonscape” surface features and heavily eroding slopes. These acreages are determined not to be in accordance with the lease requirements and are therefore not acceptable. These acreages will need to be properly reclaimed to eventually be returned to the Navajo Nation. Once properly reclaimed, these acreages, along with those pre-law lands that appear to have received more suitable reclamation, must be demonstrated to have been successively revegetated in accordance with designated criteria, prior to BIA’s granting lease relinquishment.”*⁶

To our knowledge, these failings have never been remedied. Aerial photographs of Black Mesa Mine taken last summer (below) certainly don’t show any meaningful improvement in the condition of the land. After 15 years, had reclamation been done properly, native vegetation should have taken root and trees should be growing as in the surrounding unmined areas. As you can see, that is far from the case.

⁶ Letter from U.S. Department of the Interior, Bureau of Indian Affairs, Navajo Regional Director to Randolph Lehn, Director, Environmental Services, SW, Peabody Energy Corp. re: Indian Lands Lease Relinquishment Requirements - Mined Land Revegetation Standards, June 9, 2015. (Appended to this Testimony as an Attachment 1).



Black Mesa Mine, June 2020. Photos courtesy of EcoFlight,

These deficiencies may be one reason why, 15 years after the mine closed, OSMRE still has only fully released Peabody from its reclamation responsibilities – called termination of jurisdiction – on just a third of the areas at Black Mesa Mine disturbed during mining (1,608 of 4,891 acres), according to the last year of reporting provided.⁷ And there's still 260 acres that have yet to be soiled and reseeded or planted, 15 years later (see table below).

Table 3.
Reclamation Status of Areas Disturbed under the
Initial Regulatory Program at Black Mesa Surface Mine

Current Permit Number: AZ-0001

Reporting Year: 2019

MINE AREA	Disturbed Areas		Long-term Facilities (1)	Active Mining	Areas Backfilled and Graded		Areas Soiled and Seeded / Planted		Termination of Jurisdiction	
	1 2019	2 All Years	3 All Years	4 All Years	5 2019	6 All Years	2019	7 All Years	2019	8 All Years
J-1	0	524	14	0	0	511	0	499	0	265
J-3	0	106	11	0	0	96	0	95	0	94
J-7	0	1199	39	0	0	1160	0	1149	0	886
J-27	0	49	0	0	0	49	0	49	0	0
N-6	0	2110	31	0	0	2079	0	2065	0	363
Mine Support (2)	0	903	664	0	129	239	0	15	0	0
Total	0	4891	759	0	129	4132	0	3872	0	1608

All areas are rounded to the nearest acre.

During the 46 years that Kayenta Mine was in operation, Peabody dug up or disturbed 28 square miles of land. A little over a quarter of that total (5,162 acres) is regulated under OSMRE's initial regulatory program (pre-law lands). The remaining three-quarters (12,698 acres) is regulated

⁷ 2019 Reclamation Status Tables for Initial Regulatory Areas at Black Mesa Mine, Generated by Peabody Energy on Aug. 7, 2020.

under the umbrella of SMCRA, which requires “contemporaneous reclamation.” In other words, reclamation is supposed to begin in mined areas once a coal seam has been depleted and operations move to another area. Yet, here we are, nearly two years after the mine closed, and the spoil piles, overburden and pits remain much as they were when mining ceased. Aerial photos from last summer show the pitiful progress on reclamation, and next to nothing has been done since then.



Kayenta Mine, Navajo (N) mining area (northwest), June 2020. Photos courtesy of EcoFlight,



Kayenta Mine, Joint (J) mining areas (southeast), June 2020. Photos courtesy of EcoFlight,

Of particular note is the amount of land for which OSM has terminated jurisdiction at Kayenta. The mine was in operation for 46 years. It has been shut down for nearly two years. Reclamation work is supposed to be conducted contemporaneously. Yet, of the 28 square miles of our land that was dug up, blasted, carved out and covered up at Kayenta, as of the end of 2019, OSM had fully released Peabody from its reclamation obligations on just 20% of it. There were more than 2,000 acres actively being mined when Kayenta Mine closed. There are still more than 2,000 acres that haven't been even

the most basic step of back-filling take place. The pits, the piles and mounds of overburden that were there when the mine closed are still there, as you can see in the photos above.

Table 1.
Reclamation Status of Areas Disturbed under the
Initial Regulatory Program at Kayenta Surface Mine

Current Permit Number: AZ-0001

Reporting Year: 2019

MINE AREA	Disturbed Areas		Long-term Facilities (1)	Active Mining	Areas Backfilled and Graded		Areas Soiled and Seeded / Planted		Termination of Jurisdiction	
	1 2019	2 All Years	3 All Years	4 All Years	5 2019	6 All Years	2019	7 All Years	2019	8 All Years
J-16	0	805	12	0	0	793	0	777	0	0
N-1	0	348	0	0	0	348	0	348	0	341
N-2	0	674	0	0	0	674	0	674	0	662
N-6	0	877	67	0	0	810	0	762	0	543
N-7	0	434	0	0	0	434	0	434	0	411
N-8	0	513	0	0	0	513	0	513	0	487
N-10	0	202	16	0	0	186	0	186	0	0
N-14	0	1098	10	0	0	1088	0	1084	0	0
Mine Support (2)	0	211	190	0	0	21	0	16	0	0
Total	0	5162	295	0	0	4867	0	4794	0	2444

All areas are rounded to the nearest acre.

Table 2.
Reclamation Status of Areas Disturbed under the
Permanent Regulatory Program at Kayenta Surface Mine

Current Permit Number: AZ-0001F

Reporting Year: 2019

MINE AREA	Disturbed Areas		Long-term Facilities (1)	Active Mining	Areas Backfilled and Graded		Phase I Bond Released		Areas Soiled and Seeded / Planted		Phase II Bond Released		Final Seeded / Planted for 10 Years		Phase III Bond Released	
	1 2019	2 All Years	3 All Years	4 All Years	5 2019	6 All Years	2019	7 All Years	2019	8 All Years	2019	9 All Years	2019	10 All Years	2019	11 All Years
J-16	0	495	3	0	0	492	0	459	0	490	0	0	0	424	0	0
J-19	1	3893	184	1011	3	2698	0	1837	178	2329	0	736	10	1066	0	0
J-21	32	4200	115	364	0	3721	0	3560	0	3523	0	2471	244	2936	1384	1384
N-2	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0
N-6	0	23	11	0	0	12	0	0	0	0	0	0	0	0	0	0
N-9	0	1391	137	624	14	630	0	0	0	316	0	0	0	0	0	0
N-10	0	7	0	0	0	7	0	0	0	7	0	0	0	0	0	0
N-11	0	892	38	0	0	854	854	854	0	829	0	0	51	346	0	0
N-14	0	555	46	0	0	509	0	487	0	515	0	487	0	469	0	0
Mine Support (2)	0	1253	1156	0	0	83	0	0	0	0	0	0	0	4	0	0
Total	33	12698	1690	2002	17	9006	854	7197	178	8009	0	3694	305	5245	1384	1384

All areas are rounded to the nearest acre.

(1) Long-term mining or reclamation facilities include haul and access roads; temporary dams and impoundments; permanent dams and impoundments; diversion and collector ditches; water and air monitoring sites; topsoil stockpiles; overburden stockpiles; repair, storage, and construction areas; coal stockpile, loading, and processing areas; railroads; coal conveyors; refuse piles and coal mine waste impoundments; head-of-hollow fills; valley fills; ventilation shafts and entryways; and noncoal waste disposal areas (garbage dumps and coal combustion by-products disposal areas).

(2) Mine Support accounts for disturbed areas not directly associated with a specific mine area, including overland conveyor, coal loadout, and other facilities described in footnote (1).

To make matters worse, Peabody has submitted an application to delay a majority of this work even longer. OSM said in June 2019 that Peabody would file a permit revision application to address permanent mine closure at Kayenta Mine “sometime this summer.” It took the company until Dec. 20,

2019 to submit only a revised reclamation schedule, four months AFTER the mine had already closed. Under Peabody's proposed schedule revisions:⁸

- Of the 1,850 acres scheduled for major reclamation activities (backfilling and grading) on the most recent active mining areas, Peabody proposes delaying work on 1,325 acres, or 71.6%, until 2022 or later, 800 of those until 2023 or later.
- For areas requiring top-soiling and seeding, Peabody proposes delaying reseeding on 1,475 acres of the 1,925 acres that will need it, or 76.6%, until 2022 or later.

Delaying this work also has measurable economic consequences. Hundreds of workers were once employed at the mine, and many of them could be working now on reclamation jobs. According to one recent quantitative analysis, cleanup at Kayenta would create 416 job years,⁹ that's 200 or more workers on the job for the next two years, when the majority of major reclamation work would be happening.

All of this is unacceptable. The federal government, including OSM, has a special trust responsibility to Native American tribes. But so far, the only thing we see is the agency bending over to serve the needs of Peabody, helping it get away with doing the least amount possible in terms of giving our land and water back to us. We are asking for your help to make things right.

Mining and Damage to Vital Groundwater Supplies

The Navajo Aquifer (N-Aquifer) is the primary source of domestic water for both the Navajo and the Hopi living on Black Mesa. Water is life, and for centuries, seeps and springs fed by the pristine, Ice Age aquifer sustained our people, the region's wildlife and native plants, and our agricultural practices. Water is at the heart of many of our spiritual practices and ceremonies, and until mining came along, even in the aridity of the Southwest, it was plentiful enough. The opening of Black Mesa and Kayenta Mines changed all that. Combined, the two operations consumed around 6,100 acre-feet of water a year from the aquifer. That's more than eight Olympic-sized swimming pools of water pumped out of the aquifer every day for the 32 years the two mines were in operation at the same

⁸ Compiled from Peabody Western Coal Co. / Kayenta Mine Permanent Program Permit AZ- 0001F / Chapter 20 - Reclamation Schedule, received by OSMRE on December 20, 2019. (Appended to this Testimony as an Attachment 2).

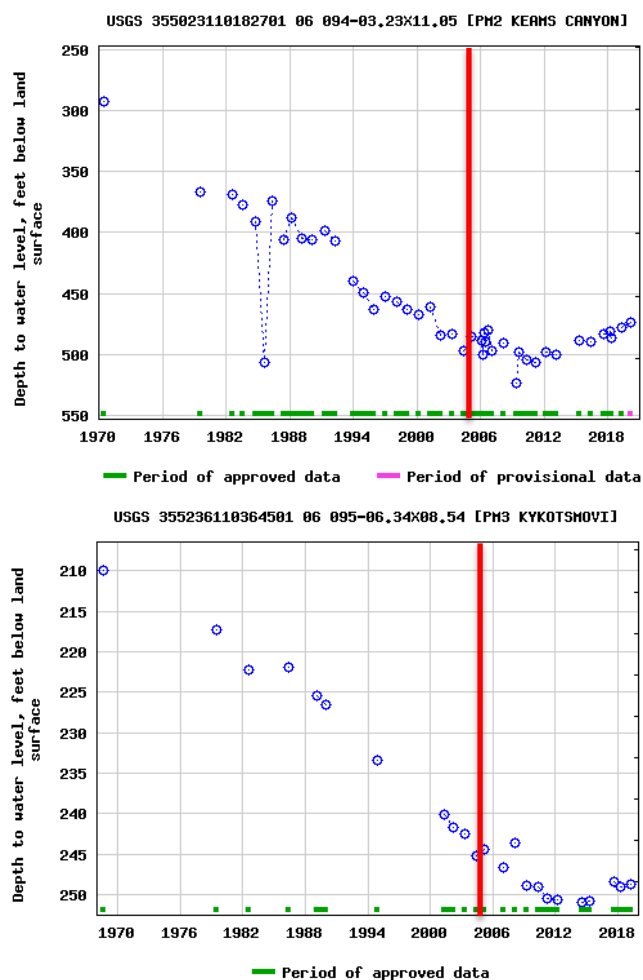
⁹ Western Organization of Resource Councils. "Coal Mine Cleanup Works: A Look at the Potential Employment Needs for Mine Reclamation in the West." October 2020. http://www.worc.org/media/Reclamation-Jobs-Report-FINAL_Nov-2020.pdf

time, all to turn lights on in Los Angeles, Las Vegas, Phoenix and Tucson, and to pump Colorado River water to the rest of Arizona.

Peabody’s coal leases required the company to provide alternative sources of water as a condition of temporary approval of the lease. The language is unequivocal:

*“Should the Secretary of the Interior determine, at any time, that the operation of wells by Lessee is endangering the supply of underground water in the vicinity or so lowering the water table that other users of the such water are damaged, he may, at his option, either (1) require the Lessee or Peabody Coal Company, at its sole expense, to provide water in quantity and of quality equal to that formerly available from such underground supply to such other users.”*¹⁰

The problem is that contrary to all common sense and evidence, both OSM and Peabody have for the history of the two mines completely minimized mining’s impacts. Water levels in some wells in the region surrounding the mine are 100 feet or more lower than they were when mining started. As a result, countless seeps and springs that were once reliable sources of water have dried up. But OSM and Peabody cover up such impacts by using “modeling simulations” to manipulate the data. Peabody has spent millions to create a model that downplays the impact of mining and contorts the data to put the blame for dropping water levels on Hopi and Navajo municipal use. In its most recent assessment of mining impacts on the aquifer, OSM’s “3D Flow Model” determined at one monitoring station northeast of Kayenta Mine that municipal water use was responsible for 97% of the projected 108 feet of drawdown in the aquifer at the site, even though



¹⁰ Hopi Coal Lease, No. 14-20-0450-5743 (Sentry Royalty); June 6, 1966.

mining consumed almost three times as much water as the Hopi and Navajo communities in the area.¹¹ At another well, south of the mine, the model concluded that half the drawdown of 30 feet was because of municipal use, even though mining used 45% more water. If domestic water use were actually the cause of falling water levels, however, as OSM and Peabody claim, then it would be logical to conclude that water levels would have kept dropping after the closure of Black Mesa Mine. That is far from the case. Measurements from U.S. Geological Survey wells clearly indicate that nearby wells have started to stabilize since mining stopped at Black Mesa Mine in 2005 (red line as shown in the graphs above).¹²

The law and the leases Peabody has with the Navajo and Hopi require mined areas to be returned to us in “as good condition as received.” That includes restoring our vital water resources.

Peabody’s Financial Condition

Looming over these inadequacies in reclamation of Black Mesa and Kayenta Mines is Peabody’s deteriorating financial condition. Peabody emerged from its first Chapter 11 bankruptcy just four years ago and it barely avoided another insolvency earlier this year by cutting a deal with surety companies and banks to restructure hundreds of millions of dollars in debt tied to its reclamation bonds.¹³ In April 2020, declining demand for coal forced Peabody to lay off 170 workers at its North Antelope Rochelle Mine (NARM)) in Wyoming, the largest coal mine in the world. And three months later, Peabody was forced to write down the value of the mine by \$1.42 billion. Since coming out of bankruptcy in 2017, the company’s stock has lost more than 90% of its value. And finally, Peabody’s CEO just announced he is leaving – with a golden parachute that will pay him \$85,000 a month as a “consultant.”¹⁴

Given the dramatic structural decline of the coal industry in general, Peabody’s shaky financial condition raises serious concerns about the company’s ability and commitment to fully reclaim the two

¹¹ Review and Analysis of Navajo Aquifer Material Damage Criteria for Peabody Western Coal Company’s Kayenta Mine Complex. U.S. Dept. of the Interior, Office of Surface Mining, Reclamation and Enforcement, Program Support Division. June 2020.

¹² Data from U.S. Geological Survey, National Water Information System. Black Mesa Observation Wells.

¹³ See “World’s largest coal producer warns of bankruptcy risk,” Financial Times, Nov. 9, 2020. <https://www.ft.com/content/7ef222f6-616c-4831-8193-9429f2ce9661>

¹⁴ See “CEO of U.S. Coal Giant Peabody Energy to Step Down,” Bloomberg, March 18, 2021. <https://www.bloomberg.com/news/articles/2021-03-18/ceo-of-u-s-coal-giant-peabody-energy-to-step-down>

mines and restore the groundwater depletions that have resulted from its mining operations on Black Mesa.

Significant Permit Revision

The extent of the cumulative damage caused by the past 50-plus years of mining on tribal lands and on our vital water supply is significant and it must be addressed with the full force of the federal government's trust responsibilities to the Navajo Nation and Hopi Tribe. And the best vehicle for ensuring that proper reclamation and aquifer restoration are achieved is through a "Significant Permit Revision" to Peabody's operating permit for Kayenta Mine, which expired last July and is due for renewal. Going from 8 million tons a year to zero certainly qualifies as a significant change in production levels, but to date, OSM has completely dismissed the idea that a significant permit revision is necessary. This is not discretionary, so we're not sure why OSM isn't following through. In February, Arch Coal announced it was closing its Coal Creek Mine in Wyoming. A month later it submitted a notice of a significant mine permit revision¹⁵ – because that's what the law requires. Kayenta Mine closed nearly two years ago, but OSM hasn't lifted a finger to require a significant permit revision.

The designation of a Significant Permit Revision will allow full participation and involvement of our tribes in helping determine the scope and direction of reclamation. It will require a comprehensive review of reclamation plans and help define the extent of reclamation necessary to restore the land and groundwater at both mines "to pre-mining conditions." It will require a whole-of-government approach, with collaboration between OSM and agencies like the Bureau of Land Management, Bureau of Indian Affairs and Environmental Protection Agency. And it will create a robust public process that will provide our people with a genuine opportunity to have a say in what reclamation looks like.

The public participation aspect alone would be a dramatic improvement over the current circumstances. OSM has made it incredibly difficult for our groups to monitor the status of cleanup work. None of the records or documents that should be available to the public are online. We actually had to hire someone to go to OSM's offices in Denver to scan paper copies. And that was before COVID. Earlier this year, they finally dumped thousands of pages of documents on us at once.

¹⁵ Letter from Arch Coal to Wyoming Dept. of Environmental Quality re: Coal Creek Mine Permit 483, Post-Mining Topography Revision, March 30, 2021. Appended to this Testimony as an Attachment 3).

A pro forma renewal of Peabody's Kayenta Mine permit, especially under Peabody's dismal financial condition, would be disastrous for reclamation. It would allow Peabody to dictate what reclamation looks like and the schedule it takes place under, in all likelihood cutting corners to save money. It also would further limit the ability of our people to participate in the reclamation process in anything but a token way. Without the Significant Permit Revision, Peabody's existing permit will be rubber-stamped for renewal, allowing the delays, deficiencies and denials that plague the current pace and extent of clean-up to continue.

Conclusion

The federal government has a trust and fiduciary responsibility to the Hopi Tribe and Navajo Nation to ensure there is proper and timely reclamation of tribal lands and resources that have been damaged through over half a century of mining. The natural resources of both tribes have been exploited by the federal government and Peabody, and unless reclamation is carried out, the entire Black Mesa ecoregion may be uninhabitable by tribal members. The Navajo Aquifer may never be fully recharged. To date, there has been no effort made "to bring the lands to pre-mining conditions" by the federal government and Peabody. We are asking for Congress' help in ensuring that there are no more broken promises. Congress has the ability to help hold Peabody accountable and to make sure OSM meets its trust responsibilities to the Hopi and Navajo. And the best way to do that is to require a significant mine permit revision before Peabody's permit is renewed.

– Nicole Horseherder and Ben Nuvamsa

Attachment 1

Horseherder / Nuvamsa Testimony Oversight Hearing on Environmental Justice for Coal Country

June 15, 2021



IN REPLY REFER TO:
N420 – Division of Real
Estate Services

United States Department of the Interior

Bureau of Indian Affairs

Navajo Region

P.O. Box 1060

Gallup, New Mexico 87305-1060

JUN 09 2015

CERTIFIED MAIL – RETURN RECEIPT REQUESTED

15-06-16-02

Randolph Lehn
Director, Environmental Services, SW
Peabody Energy Corporation
3001 West Shamrell Boulevard, Suite 110
Flagstaff, Arizona 86001

RE: Indian Lands Lease Relinquishment Requirements – Mined Land Revegetation Standards

Dear Mr. Lehn:

As you are aware, certain stipulations within your mining/mineral lease require that the lessee reclaim and return all mined lands to “as good condition as received”. For lands mined after the 1977 creation of the Surface Mining Control and Reclamation Act (SMCRA), the promulgated federal regulations at 30 CFR 750 include clear guidance defining revegetation success standards. However, for lands mined prior to SMCRA, revegetation success standards have thus far remained unclear.

In efforts to clarify success standards for the pre-SMCRA mined lands (a.k.a. pre-law lands), over the past several years discussions have been held between representatives of the Bureau of Indian Affairs, Navajo Region (BIA), representatives of the Navajo Nation and representatives of your company. Unfortunately, the outcome of these discussions has not resulted in coming to a satisfactory conclusion on this important matter, i.e. revegetation success standards have not been developed for pre-law mined and reclaimed lands.

Today, reclamation on pre-law lands remains inconsistent and often unacceptable, with considerable acreages remaining as raw ungraded and eroding spoil piles, largely void of vegetation. On other areas where spoils have been rough graded, these acreages were not topsoiled to promote revegetation and/or were not backfilled/graded in a manner that allowed suitable plant growth material to be present on the surface. These practices have minimized the potential for the mined landscape to be left in a manner defined as being “as good condition as received”. Some of these acreages have been idle for many years, having prominent “moonscape” surface features and heavily eroding slopes. These acreages are determined not to be in accordance with the lease requirements and are therefore not acceptable. These acreages will need to be properly reclaimed to eventually be returned to the Navajo Nation. Once properly reclaimed, these acreages, along with those pre-law lands that appear to have received more

suitable reclamation, must be demonstrated to have been successively revegetated in accordance with designated criteria, prior to BIA's granting lease relinquishment.

The BIA has concluded a review on the matter of criteria needed for demonstrating revegetation success on pre-law mined lands as defined by the lease stipulations. Please be advised that the BIA has determined that the revegetation standards defined within the federal regulations at 30 CFR Subchapter B, Part 715.20, best describe the intent of the lease requirements, as related to demonstrating revegetation success on pre-law mined lands. Therefore each lease relinquishment application received by the BIA in the future must include a demonstration that all mined and reclaimed lease lands are in full accordance with the revegetation performance standards stipulated in 30 CFR 715.20.

Should you have any questions regarding the BIA's lease relinquishment requirements discussed above, please contact Mr. Lyle Ben, Natural Resources Specialist at (505) 863-8394.

Sincerely,

A handwritten signature in black ink, appearing to be "Lyle Ben", written over a horizontal line.

Regional Director, Navajo

cc: Navajo Nation, Attention Minerals Department
Office of Surface Mining Reclamation and Enforcement
Bureau of Land Management
PWCC, Kayenta Mine, Attention Mine Manager

Attachment 2

Horseherder / Nuvamsa Testimony Oversight Hearing on Environmental Justice for Coal Country

June 15, 2021



Kayenta Mine

DEC 23 2019

Kayenta Mine
P.O. Box 650
Kayenta, AZ 86033
928.677.5011

December 20, 2019

Ms. Amy McGregor
Office of Surface Mining
Reclamation and Enforcement
1999 Broadway, Suite 3320
Denver, CO 80202-3050

RE: Peabody Western Coal Company / Kayenta Mine Permanent Program Permit AZ-0001F / Chapter 20 – Reclamation Schedule

Dear Ms. McGregor:

Peabody Western Coal Company (PWCC) submits the enclosed revision update to Chapter 20 – Reclamation Schedule at Kayenta Mine.

Enclosed are insertion instructions and seven (7) copies of the following: Chapter 20 – Reclamation Schedule. This chapters is to be replaced in its entirety.

Respectfully,

Randolph S. Lehn
Director, Operations Support

Cc: G. Altsisi (PWCC)
M. Shepherd (PWCC)

INSERTION INSTRUCTIONS

Kayenta Complex

Permanent Program Permit AZ-0001F

Chapter 20 – Reclamation Schedule

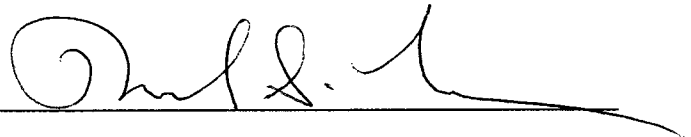
Submitted December 20, 2019

<u>Volume</u>	<u>Chapter</u>	<u>Description</u>
11	20	Replace Chapter 20 – Reclamation Schedule

VERIFICATION

I verify under oath that the information contained in this application for a permit; revision; termination of jurisdiction; renewal; administrative update; bond release; or transfer, sales or assignments of permit rights is true and correct to the best of my information and belief.

Signature of Responsible Official



Title Director, Operation Support

SUBSCRIBED AND SWORN TO BEFORE ME BY Randolph S. Lehn

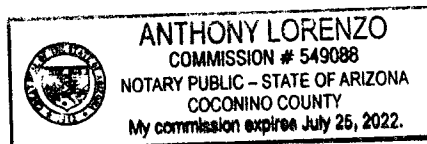
This 20th Day of December 2019

NOTARY PUBLIC



MY COMMISSION EXPIRES

July 25 2022



CHAPTER 20

RECLAMATION SCHEDULE

CHAPTER 20

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CHAPTER 20
RECLAMATION SCHEDULE

Introduction

Chapter 20 presents a projected 5-year timetable based on the location of the final pits when mining was permanently discontinued in August of 2019. Phases of the reclamation plan and projected reclamation schedules for 2020-2024 in the N-9, J-19, J-21 coal resources areas and support facilities associated with these areas are presented in Tables 1 through 3. Supporting information regarding the timing of reclamation activities may be found in the chapters that discuss the components of the reclamation plan. For example, revegetation best practice application periods are discussed in Chapter 23, Revegetation Plan. The reclamation schedule covers the next planned five year permit term. Drawing 85360 identifies the lands that are pre-SMCRA (December 16, 1977) and those lands under interim and permanent regulatory programs.

Timing of Reclamation Activities

A generalized timetable of reclamation activities within a year is shown in Figure 1. The timetable outlines the sequence and timing of each major phase of reclamation normally conducted within the year. Precise specification of the timing or area for each reclamation phase in each mining area is not possible for the following reasons: (1) operational considerations and consequent manpower and equipment availability can affect the rate of progress of reclamation activities; and (2) weather conditions, the availability of materials, laboratory analytical delays and the rate of final pit grading advance affect the progress of grading, topsoiling and seeding in each mining area. The reclamation process is affected by the rate of the amount of acres graded, topsoiled, and revegetated each year and which can vary somewhat. Once spoils are graded, the reclamation sequence will follow that presented in Figure 1 and as described in Chapters 22, 23 and 26.

Figure 1
Reclamation Timetable

Sequence of Activities	Month											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Backfilling and Grading	_____											
Topographic Manipulation	-----											
Measures Used in Conjunction												
w/Drainage Features &												
Overland Conveyances	-----											
Topsoil Redistribution,	-----											
Graded Spoil Sampling, First Order Terrace												
and Drainage Construction												
Spoil or Soil Surface												
Mechanical Manipulation												
Measures	-----											
Seeding/Vegetation Measures	-----											
Mulching	-----											
Cultural Plant and												
Habitat Area Planting	-----											
Fencing	_____											
Maintenance & Management	_____											

Notes: _____ Operations performed during periods indicated. Primary revegetation season.
 ----- Operations performed, weather permitting. Secondary revegetation season.

Sedimentation pond construction or diversion structures are completed prior to any other surface disturbances. These activities insure sediment control and protection of the hydrologic system (Chapters 6 and 26).

Clearing of woody or other site materials to facilitate topsoil removal is performed immediately prior to topsoil removal and ahead of mining or associated activities. Site clearing and topsoil salvage operations (Chapter 22) are typically conducted from March to November. These activities may be conducted in other months if mining conditions warrant and site conditions are not adversely affected by weather.

Backfilling and grading activities are described in Chapters 21 and 26 are conducted. These activities are performed throughout the year. They include grading of the landform to the approved PMT, the designs for the primary drainages, and the guidelines for drainages and landform characteristics presented in Chapter 26 and Attachment A to that chapter. The designs are installed during the course of the reclamation grading process. These activities are typically conducted from March through November or as site conditions allow.

Associated graded spoil suitability determinations (Chapter 22), topsoil or suitable plant growth media replacement, and the construction or installation of surface stabilization features follow the same timetable as topsoil salvage operations. If ground and weather conditions permit, topsoil material redistribution may be conducted in months other than those indicated in the reclamation timetable (Figure 1).

Mechanical manipulation of the plant growth media or topsoil, including seedbed preparation, is conducted following the redistribution of the media or topsoil material. These activities entail deep ripping and contour furrow disking and are described in detail in Chapters 21, 22, 23 and 26. These operations are performed from March through October, or at other times when weather and surface conditions permit.

Seeding and mulching of topsoiled areas is conducted during the primary seeding season (May to September) following topsoil redistribution and mechanical manipulation, weather permitting. Seeding and mulching may be conducted in the secondary seeding season if weather and ground conditions permit. Revegetation activities are discussed in Chapters 23 and 26. Fence construction is performed throughout the year. Fence construction is interrupted only by inclement weather.

Maintenance and management activities are conducted throughout the year. The timing of these activities is dependent upon the specific activity. Fence maintenance and removal of trespass livestock are conducted throughout the year as needed. Interseeding and reseeding is conducted either during the primary or secondary seeding seasons based on needed remedial work. Surface stability monitoring and remedial actions are conducted as required and as described in Chapter 26.

Projected Reclamation Schedules

Projected annual reclamation schedules are presented in Tables 1 through 3 for the coal resource areas in which reclamation will occur in the 5-year term at the Kayenta Complex. The projected acres disturbed, backfilled and graded, and topsoiled and seeded for the 2020-2024 year reclamation blocks are included. No additional disturbance is anticipated during the 5-year term.

TABLE 1

Projected Annual Reclamation Schedule, N-9 Coal Resource Area, Years 2020-2024

Year	Acres Disturbed	Acres Graded	Acres Topsoiled and Seeded
Status as of 12/31/18 ¹	1417	619	314
2020 - 2024			
2020	0	25	25
2021	0	200	100
2022	0	250	200
2023	0	125	150
2024	0	0	125

¹Status for total acres currently disturbed, graded and topsoiled and seeded in the N-9 pit area as of 12/31/18. Disturbed acres include facilities, ponds, roads, and stockpiles that will remain operational beyond 2020.

TABLE 2

Projected Annual Reclamation Schedule, J-19 Coal Resource Area, Years 2020-2024

Year	Acres Disturbed	Acres Graded	Acres Topsoiled and Seeded
Status as of 12/31/18 ¹	3974	2809	2187
2020 - 2024			
2020	0	0	50
2021	0	50	0
2022	0	150	150
2023	0	400	400
2024	0	400	450

¹Status for total acres currently disturbed, graded and topsoiled and seeded in the J-19 pit area as of 12/31/18. Disturbed acres include facilities, ponds, roads, and stockpiles that will remain operational beyond 2020.

TABLE 3

Projected Annual Reclamation Schedule, J-21 Coal Resource Area, Years 2020-2024

Year	Acres Disturbed	Acres Graded	Acres Topsoiled and Seeded
Status as of 12/31/18 ¹	4327	3859	3637
2020 - 2024			
2020	0	150	25
2021	0	100	250
2022	0	0	0
2023	0	0	0
2024	0	0	0

¹Status for total acres currently disturbed, graded and topsoiled and seeded in the J-21 pit area as of 12/31/18. Disturbed acres include facilities, ponds, roads, and stockpiles that will remain operational beyond 2020.

Completion of Mining Operations and Final Reclamation

Facility reclamation will be conducted in the 5-year term unless approved as an element of the postmining land use plan. After completion of any necessary regrading, the reclaimed facility areas will be topsoiled or covered with suitable plant growth media and revegetated. It is estimated that three to five years will be needed to completely reclaim all facilities and structures following the cessation of mining. Decommissioning of mine facilities will commence when the facilities are no longer required to support mining activities. The structures and equipment, including concrete foundations and sub-bases, will be removed unless approved by the regulatory authority to be reclaimed in-place (a minimum of four feet below the finished reclamation surface) or they have been approved as part of the post mine land use. Materials having economic value will be salvaged. Materials that are not salvageable will be buried in accordance with the non-coal mine waste disposal plan as required by 30 CFR 816.89 and in accordance with regulatory approval. All structure and facility sites will be contoured to conform with the natural landform. Cut and fill slopes which are compatible with the postmining land use and which are approved by the regulatory authority will be retained but with edges blended into the topography.

Attachment 3

Horseherder / Nuvamsa Testimony Oversight Hearing on Environmental Justice for Coal Country

June 15, 2021

COAL CREEK MINE THUNDER BASIN

7 5/066
Allie Letcher
Environmental Engineer
(307) 464-2170
aletcher@archrsc.com

March 30, 2021

Mr. Peter Rakowski
WY DEQ, Land Quality Division, District III
2100 West 5th Street
Sheridan, WY 82801

MR	KM	RB	MG
KS	BK	LM	JM
DL	PR	DS	GT
CHEY			

RE: Coal Creek Mine, Permit 483, Post-Mining Topography Revision

Dear Pete,

Thunder Basin Coal Company, LLC wishes to revise the post-mining topography (PMT) for the Coal Creek Mine, permitted under Permit 483. The proposed change is a significant revision as it does impact coal removal, the affected area, and permit boundary of the mine. It also changes the mine and reclamation plans.

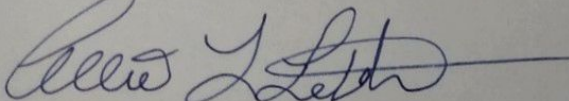
As discussed on February 8, 2021 in the meeting between LQD and Thunder Basin (Coal Creek), these PMT changes are being driven by Arch's desire to reduce reclamation liability. We plan to do this by reclaiming the East and L-Pits as they are currently configured. Given the changing coal markets, the coal reserves impacted by this decision will be further evaluated in the future. Should Coal Creek choose to mine this area in the future, the operation will resubmit a mine and reclamation plan to re-open these areas. Also, based on our conversation with the division, we will be reducing the permitted area size. We have removed unaffected lands in T44N, R70W, Sections 30 and 32 due to losing landowner surface consent and in T44N, R71W, Section 24.

Included in this packet is the most recent approval letter from the US Fish and Wildlife Service for Coal Creek's Migratory Bird Plan. This completes the Form 1, Condition No. 3, requirement from the Term 8 approval letter. We've also included the Army Corps of Engineers most recent wetlands jurisdictional determination letter.

Finally, with the post-mining topography redesign, we formally request pulling the pending East Pit Diversion Modification non-significant revision (TFN 7 4/014).

Enclosed you will find two copies of this revision packet with an index sheet detailing the changes described above. If you have any questions or concerns, please do not hesitate to contact me.

Sincerely,



Allie Letcher

Received

APR 01 2021

DEQ
Sheridan

Thunder Basin Coal Company, L.L.C.

Coal Creek Mine

1280 T-7 Road

Wright, WY 82732

(307) 939-1300

archrsc.com

The Coal Creek mine is owned and operated
by Thunder Basin Coal Company, L.L.C., a wholly
owned subsidiary of Arch Resources, Inc.

ARCH