Testimony

The Gold King Mine Environmental Disaster: Examining the Harmful Impact to Indian Country

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*I thank Kim Van Wyhe and Jacqueline Varas for their assistance. All opinions expressed herein are my own and do not represent the position of the American Action Forum.

Chairman Barrasso, Vice Chairman Tester and Members of the Committee, thank you for the opportunity to appear today to discuss the impacts of the Environmental Protection Agency's (EPA's) Gold King Mine disaster. In today's testimony I wish to make three main points:

- Although there is no direct precedent for the toxic Animas River spill in Colorado, past EPA estimates indicate that the spill could cost between $338 million and $27.7 billion;
- If each of the 500,000 known Abandoned Mine Lands (AMLs) released as much toxic waste into the rivers as the Gold King mine, the total would amount to 1.5 trillion gallons. Using the same method for estimating the lower-bound cost of the Gold King mine spill, the 500,000 AMLs would cost an estimated $1.35 trillion dollars; and
- Transparency within the Environmental Protection Agency remains elusive. The Gold King case shows inaction, poor planning and misleading statements by top officials. Prevention planning and mitigation were not adequately executed.

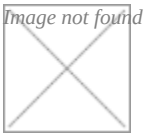
Let me provide some background on the spill as well as detail to each of these points.

Gold King Mine Blowout

Ironically, in an attempt to prevent contaminating water, a team under the supervision of the EPA was the catalyst that caused over 3 million gallons of toxic waste to be released into the Animas River on August 5th, 2015[1]. These toxins included neurotoxins, lead arsenic, thallium and other heavy metals from the abandoned Gold King mine. The contracted company, Environmental Restoration LLC underestimated the built-up volume of water, and in an attempt to install a pump to draw out the water triggered the breach[2]. The polluted water, which has covered 300 miles to date, entered the Animas and San Juan rivers through Cement Creek and has now reached Lake Powell in Utah[3].

The spill prompted emergencies in three states as well as two American Indian tribes, the Navajo and the Ute, which will bear the brunt of both the direct and indirect costs. Some of those costs are already apparent, while others will come to light months or even years from now. The toxins caused the wastewater coming from the Gold King Mine to turn a mustard yellow color created by high acidity and iron bound to solid particles (see picture).[4] The abandoned mine was closed in 1923 and is currently owned by Todd Hennis, President of San Juan Corp[5].

Source: IFL Science



Tribal Impacts

The spill, which has been identified as one of the worst hard rock mining related disasters in decades has been detrimental to its surrounding community. Local business centered around the river has dried up, farming has come to a halt and the sheer public safety threat that the 3 million plus gallons of toxic mining waste created has left waterways in Colorado, Utah, New Mexico and Arizona in peril. Studies suggest it will take decades to restore the affected waterways and surrounding areas[6].

The Navajo Nation is the largest Indian reservation in the United States with approximately 300,000 residents spread across 27,000 square miles[7]. After the San Juan River was contaminated with toxic heavy metals from Gold King Mine, Navajo leaders were forced to close the river for more than three weeks[8]. This left the reservation's agricultural economy in significant danger, as the Navajo Nation's 30,000 acres of crops depend on river water for survival[9]. The polluted wastewater negatively impacted over 215 miles of farmland as well native populations of fish, wildlife, and livestock[10]. The spill took an additional toll on Navajo Nation residents, who utilize the river daily for cooking, cleaning, and bathing. The Navajo Nation declared a state of emergency on August 11, but both the Federal Emergency Management Agency (FEMA) and the EPA have rejected the tribe's requests for federal aid[11].

According to the Navajo Nation's Division of Natural Resources "Water is Life," and "Without water, farming and raising livestock would not be possible"[12]. Throughout the Navajo Nation, many communities were established and grew because of the water available to them. The Colorado River and San Juan River are some of the major waterways that go through Navajo Nation and Lake Powell, although not on Navajo land has more than 2,000 miles of southern shoreline located on the Navajo Nation[13].

Agriculture is the largest private-sector employer on the Navajo Nation. Navajo agriculture exports average $2.5 million dollars per year producing staples of pinto beans, corn, wheat and fresh produce such as apricots and cherries, total production comes out to around $37.5 million per year[14]. The tribes rely heavily on the San Juan River for both irrigation and for livestock needs to support this growing industry.

For the past 42 days, $892,000 in revenue has been potentially lost, as the Navajo tribe has been unable to depend on the rivers due to the toxic waste. If this situation is not resolved soon, the Navajo's agriculture industry could be crippled. Using the lost days and total production. The Navajo nation has the potential to lose $1.25 million dollars per month or $41,000 dollars a day. A little over two weeks ago, Navajo Nation president Russell Begaye met with farmers to discuss plans to reopen the irrigation canal near the town of Shiprock, however due to the environmental degradation and safety hazards that are associated with the river the farmers overruled Begaye and voted 104-0 to maintain existing closures for a year[15].

The Southern Ute Indian tribe was the first to see toxic waste invade its waters, as the Animas River runs directly through its reservation. The reservation covers 1,059 square miles in 3 counties and is comprised of the

oldest residents of Colorado[16]. The Southern Ute Indians, like the Navajos, declared a state of local disaster after determining that the resources needed to manage the spill exceeded the tribe's capabilities. Much like the Navajo Nation, the Southern Ute Tribe is dependent on river water for fishing, farming, and the preservation of its natural resources. Although the long-term effects of the spill on wildlife are not yet known, the EPA's actions and subsequent closure of the Animas River has been detrimental to the tribe's quality of life and local economy[17]. The Ute Mountain Ute reservation was also affected by the spill citing that portions of their 8,500 acre reservation were also affected by the Gold King blowout.

In an independent assessment conducted by the Southern Ute Tribe it was noted that total response effort expenses that were incurred due to the spill have reached over $200,000 which has added a 45% burden to employee straight time. This number does not include the economic loss that has and will occurred as a result of the spill.

Estimating the Costs of the Animas River spill

Only time will reveal the full direct and indirect costs associated with this massive spill. The lost income, and impact on tribal living are yet to be seen but representatives from the Navajo Nation have said that the river is "an economic base that sustains the people that live along the river"[18].

The American Action Forum (AAF) recently analyzed EPA data in a study entitled "What will EPA's Toxic Animas River Spill Cost?" to determine the costs of toxic waste in the due to the Gold King Mine blowout. The study found that a new EPA regulation, which aims to limit the "amount of toxic metals and other pollutants discharged to surface waters" by steam electric power plants, attributes $424 million of annual benefits for reducing 0.47 billion pounds of toxic discharge. Therefore, an approximate estimate for the benefit of avoiding toxic waste was found to be 90 cents per gallon ($424 million/470 million gallons)[19].

When this estimate is applied to the Gold King Mine spill, the cost of the 3 million gallons of toxic wastewater spilled from the mine is estimated to be around $2.7 million. However, the costs may be much higher. At last week's hearing before the House Science, Space and Technology Committee[20], Dr. Benn the Executive Director for the Navajo Nation Environmental Protection Agency stated that the chemical spill from the Gold King Mine continues to flow at a rate of 610 gallons per minute.[21] The spill was said to have occurred at 10:58 am Mountain Time Zone. Using the time of the occurrence as well as the estimated the flow rate, AAF determined that since the initial spill, 37,012,970 additional gallons of toxic waste have been flowing (as of the start of this hearing at 2:15 pm today). The additional 37 million barrels brings the price tag to just over $36 million dollars and counting.

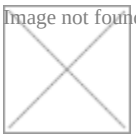
The EPA's power plant rule also serves as a useful guide for estimating the costs of the Gold King Mine spill because it refers to the prevention of arsenic and lead, toxic metals that were among those toxins released into the Animas River. However, the EPA's estimates represent the benefits of avoiding gradual water pollution, not acute environmental disasters. Also, they do not take into account direct costs that were imposed on residents in surrounding areas, which resulted from their inability to access the river for farming, fishing, recreation, and tourism. When these factors are taken into account, the total costs of the EPA's river water pollution may be significantly higher[22]

It should be noted that the EPA's affluent discharge rule was not designed to regulate acute pollution events, but rather the gradual effects of water pollution. For example, the Animas River had 300 to 3,500 times the normal levels of arsenic and lead. In addition, the figure of $2.7 million probably does not account for the value of "non-use" benefits that EPA and the Department of the Interior (DOI) attempted to quantify in the past. Here, there are direct use costs because thousands of local residents, farmers, anglers, and tourists cannot use the river in its

polluted state.

Abandoned Mine Lands

There are over 500,000 abandoned mines like that of the Gold King Mine in the United States. These abandoned mine lands or AML's pose a serious threat to human health and the environment according to the Abandoned Land Mine Portal. Environmental degradation, including sedimentary and sediment contamination, water pollution, air pollution, threats to wildlife and endangered species and public safety concerns are just a few of the dangers associated with AML's[23]. If each of the 500,000 mines released as much toxic waste into the rivers as the Gold King mine, the total would be around 1.5 trillion gallons. Using the same method for estimating the cost of the Gold King mine spill (at the lower-bound figure of $2.7 million) the 500,000 AML's would cost the American taxpayer an estimated $1.35 trillion dollars. The map below shows the state of Colorado's reclamation projects and includes the state's abandoned mines and mines under remediation[24]



Source: Colorado Public Radio

According to the Bureau of Land Management (BLM), the AML program (which is run under the Department of the Interior's Office of Surface Management) has a current funding request for $28.7 million dollars. [25] This is an increase of $1.3 million from last year. BLM states that "The Surface Mining Control and Reclamation Act established the Abandoned Mine Reclamation Fund to receive the Abandoned Mine Land fees and finance reclamation of coal AML sites. The increase includes $700,000 for ap-plied science studies pertaining to abandoned mines and $291,000 for project monitoring. Based on this funding it would take DOI over 143 plus years to pay for the cleanup of the 500,000 mines.

In 2009, the BLM released a study entitled "Feasibility Study for AML Inventory Validation and Physical Safety Closures"[26] that determined the total cost to complete field validation and physical safety remediation at 22,104 AML physical safety sites came out to $402.6 million. BLM concluded that of that $402.6 million, $11.4 million would be required to field validate and remediate all high-priority sites impacting public safety and that $12.6 million would be required to field validate and remediate the medium priority sites and an additional $377.7 million would be needed to field validate and remediate sites that are characterized as low priority. This price tag to ensure physical and environmental safety is miniscule in comparison to the cleanup and remediation efforts that would be needed if more of these spills were to occur.

EPA Transparency

In 2014, the EPA was warned that that there was a serious risk of a blowout at the Gold King mine. This raises the question as to why the EPA wasn'rsquo;t prepared for such an incident and didn't have proper containment procedures in place? According to a 92-page document that was released by the EPA "Conditions may exist that could result in a blow-out of the blockages and cause a release of large volumes of contaminated mine waters and sediment from inside the mine, which contain concentrated heavy metals[27]." Despite the explicit warning the EPA did nothing to mitigate the problem. In fact, no remediation work or maintenance had been done on Gold King mine in almost a quarter of a century. The aforementioned documents did not include any details of the spill and many of the 92 pages were redacted leading to questions regarding to transparency within

the agency, reports cite that much of the redacted information came from the 2013 safety plan. It was also revealed that it took the EPA nearly a day to inform local officials of the incident; for 24 hours there were people and businesses relying on this water source without any knowledge of the toxins that were running rampant

EPA Chief Gina McCarthy declared a moratorium on all mine remediation across the country until it can be concluded how the Gold King spill occurred[28]. McCarthy said the EPA will take time to "properly review and analyze the data" which is leaving the surrounding communities waiting for answers.

Conclusion

The Gold King Mine spill will cost a significant amount to clean up, and an unknown additional amount to monitor residual effects from the toxins. These factors will make the indirect costs as a result of the spill also indefinite for quite some time. Communities are in danger and the tribes who depend on these rivers have to find alternate water sources or relocate in order to survive.

Had the EPA taken the proper precautions and heeded their own warnings, this situation could have been avoided. The avoidance and lack of preparation for abandoned mine lands in the United States is quite evident, and potentially quite costly. It would be prudent of the EPA and DOI to come up with a plan in order to not be in the same position again and impose on the American taxpayer the costs of another careless mistake.

Thank you for your time and I am happy to answer any questions you may have.

[1] http://www2.epa.gov/goldkingmine