Newmont Proposes Treating Toxic Mine Water Forever

By John Hadder

The Bureau of Land Management (BLM) defines “treatment (of mine sites) in perpetuity” as 500 years or greater; in other words, no end in sight. This is what Newmont Mining Corporation is effectively proposing for acid mine drainage from the Phoenix Mine, located southwest of Battle Mountain. For Nevadans, a proposal in which waste requires perpetual treatment conjures up the multigenerational nuclear waste dump proposal for Yucca Mountain.

The Phoenix Mine location has a long history of mining activity, dating back to 1864 with copper extraction. It was not until the 1970’s that gold operations began with Battle Mountain Gold operating the site with the first State of Nevada gold mining permit issued in 1992. Newmont Gold acquired Battle Mountain Gold in 2003 and has been the operator since. The geochemistry of the site is very unfavorable in terms of toxic waste, where approximately 80 percent of the waste rock and ore is potentially acid generating. Acid drainage is a common and severe problem at many mine sites worldwide; it occurs when reactive rocks (generally containing sulfides) are exposed to water and air in the presence of catalyzing bacteria. There are Roman mines in Spain still draining acid. It is likely that both owners were aware of the acid generating nature of the rock and ore at the Phoenix site when they began mining there.

What is the justification for permitting mining operations (or any project) that will generate contaminated water needing treatment for perpetuity? Permitting a mine or any facility that will need perpetual care is irresponsible. For one thing, there is considerable uncertainty over 500+ years as to whether there will be institutions to fund and manage the continued toxin laden water. In the case of the Phoenix Mine, perpetuity treatment has been in the works for many years. Newmont claims that their mine expansion and revised closure plan will improve conditions on the ground. However, Newmont will need to convince GBRW that this assertion is valid for us to not oppose the expansion.

Are Nevada regulations adequate to address mines that will need perpetuity treatment? Nevada law does not specifically mention treatment in perpetuity, but does require stabilization so that “Waters of the State” are not degraded. Mining companies need to develop long-term treatment plans but perpetual treatment does not need to be factored in. A recent change in the regulations initiated by the Bureau of Mining Regulation and Reclamation defines “Mining Impacted Waters,” and gives the agency the authority to require bonding for mining impacted waters. Therefore, the state can require bonding to treat toxic drainage for as long as needed, which could be 500+ years. It is not always clear at the outset if a mine will need perpetual treatment. This uncertainty allows some mines to open that may not be permitted otherwise. Years later after operations have been ongoing a reevaluation with new data sometimes reveals that perpetual care will be needed, or conditions arise that makes this conclusion clear.

In addition, pit lakes that are typically of lower water quality than the water entering the pit lakes from the surrounding aquifer are held to a weaker standard. Restoring these bodies of water to the original water quality is not required. Thus, a pit lake can contain degraded water, but is not considered mining impacted waters based on the regulatory definition.

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CERCLA, The Comprehensive Environmental Response, Compensation, and Liability Act, better known as Superfund, exists because of lax regulatory control of industries such as mining. There are 121 mine-related Superfund sites (including proposed) in the U.S. that will cost tens of billions of dollars to clean up if cleanup is even possible. Included in these sites is Nevada’s Anaconda Mine just outside of Yerington that GBRW has been involved with since 2002.

Regular Bristlecone readers are aware that GBRW was one of the organizations that filed suit in federal court demanding that regulations regarding financial assurance (i.e., liability guarantees) under the CERCLA law be enforced by the EPA. We won that case in January! The court ordered the EPA to develop final regulations for hardrock mining by December 1, 2017. Had these regulations been in place as originally required by Congress there would have been money set aside to clean up the Anaconda Mine and many others.

We now have an EPA administrator at odds with preponderant data connecting climate change with human activities, and an administration that wishes to repeal environmental regulations. We are concerned that EPA will not follow through on the financial assurance CERCLA regulations.

Opponents to these CERCLA regulations often state that modern mining practices are much better and financial assurance regulations are unnecessary. Anticipating this argument, Earthworks’ Bonnie Gestring and GBRW’s John Hadder coauthored “U.S. Gold Mines: Spills and Failures Report,” which summarizes the results of extensive research into pipeline spills, seepage, other accidental releases and failures at 27 U.S. gold mines, including several in Nevada.

The research found that:
- **Gold mines always spill**: Mines responsible for 93 percent of U.S. gold production have accidentally spilled cyanide (from processing gold bearing rock), diesel, or other hazardous materials.
- **Gold mines almost always pollute water**: 74 percent of operating gold mines polluted surface and/or groundwater, including drinking water.
- **When gold mines don’t pollute water, it’s because there’s no water nearby**. Of the mines that didn’t pollute water, only one had a perennial stream in the project area.

Besides cyanide used in processing, gold mining can result in toxic pollution of water (and earth) by arsenic, cadmium or other existing hazardous substances; persistent acid mine drainage into water bodies often develops at gold mines where sulfide minerals are present.

Data in our report, released in July 2017, came from government data and news reports from the 27 operating U.S. gold mines accounting for 93 percent of national gold production, according to the United States Geological Survey. Modern mines still pollute; the public deserves real mining reform to prevent degradation of clean water by mining operations past, present, and future.

A welcome addition to mining and climate reform in Nevada is the Progressive Leadership Alliance (PLAN) of Nevada’s new Environmental Justice program.

Staff currently includes Manny Becarra as the director, UNR fellow Gianni Giuliani, CSN fellow Kimberly Padilla-Estrada, and UNR intern Ian Bigley. With an increase in hands-on support from community volunteers and by leveraging existing staff insight and experience, we are expecting the norm of profits and corporate interests taking precedence over the needs of people and planet to be changing here. Ian is capably giving time to GBRW projects as well.

Manny is a long-time Reno area resident with strong connections in the local arts, business and education community from his years as an educator, entrepreneur and leader in digital product, vision and strategy.

We sat down with Manny recently and asked him how he came into this work. Manny cited his childhood road trips to Mexico with his mother and siblings through the night skies and landscapes of Nevada and the states in between as creating an indivisible bond with the planet. With inspiration and his background as tools, Manny will oversee the bridging of environmental concerns and environmental justice, organized education, homeschoolers and other groups to create a larger constituency for justice and the environment in this state and beyond.

“Make everyone a stakeholder,” Manny says.

Currently, UNR and PLAN are working together on a data-based report, “Environmental Injustice in Nevada” to inform program decisions and policy goals for the new program and upcoming legislative session in 2019.

The EJ program got an informal kickoff in June with the Great Basin Water Tour. Sponsored by GBRW, PLAN and the Great Basin Water Network (GBWN), the Water Tour brought together students, volunteers, environmentalists, ranchers and water professionals in a rolling educational and collaborative event that began in Reno and Vegas and ended at the Snake Valley Festival, which brought together folks fighting the proposed Las Vegas Water Grab. See more at http://watertour.planevada.org.

If the Southern Nevada Water Authority wins this protracted battle, they will be importing billions of gallons of water 250 miles from rural valleys near Great Basin National Park to always thirsting, growing Clark County. The water transfer will affect seeps, springs, wildlife, native plants and the livelihood of long-established ranchers. Great Basin Resource Watch opposes the plan.

PLAN Environmental Justice: www.ej.planevada.org
Great Basin Water Network: www.greatbasinwater.net
**ANACONDA MINE LISTING, CLEANUP STALLED**

By Susan Juetten

Procedures to add the closed, toxic Anaconda copper mine near Yerington to the Superfund NPL (National Priority List) are again stalled and in limbo.

Complications arose when Nevada’s Department of Environmental Protection (NDEP) announced their desire to take over remediation at the site back in June, at the behest of Atlantic Richfield (ARC), who is financially responsible for most of the site. The EPA must agree to this major change via a deferment document, which is in process. A listing deferment for a site this complex and advanced in the Superfund process has never been completed before, according to the EPA.

The agency stated that “the most critical issues are ensuring that ARC is committed to performing a CERCLA equivalent Remedial Investigation and Feasibility Study (RI/FS) for the entire Site and ensuring that the deferral documents do not constrain NDEP’s authority to select the appropriate CERCLA protective remedy based on the results of RI/FS.” This means that any solution selected must adhere to the standards under which the Superfund program operates, i.e., the CERCLA law. Before the deferment can occur, many stakeholders must concur and/or renegotiate agreements. Besides the EPA and NDEP, parties involved include Atlantic Richfield, the BLM, and the Walker River and Yerington Paiute Tribes.

In the meantime, the most immediately problematic part of the closed mine site, known as OU-1 (the Arimetco acid leach pads), is being treated using “enhanced evaporation” by spraying the toxic liquids accumulating there back over the heap next to the ponds, which are at or near capacity. The September report by the contractors working at the site stated that 597,503 gallons were pumped. Although the top of the heap is apparently lined and the contractors spray when there was no wind, enhanced evaporation as a remedy to manage fluids and pond capacity is not considered a best practice, and is one aspect of the issues at the mine for which a more permanent solution must be found.

GBRW is concerned that under State of Nevada control that ARC will not (BP) remain on the hook for complete cleanup of the site. GBRW does not agree with the timeline proposed by BP/ARC. Similar sites have required decades to remediate especially when there is groundwater contamination, as is the case at Anaconda.

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**BALD MOUNTAIN UPDATE**

By Susan Juetten

The expansion of the Bald Mountain Mine near Eureka has concerned conservationists since it was proposed in 2011 by previous owner Barrick Gold. This mine already had a large footprint, and the proposed expansion had the potential to heavily impact seasonal routes of up to 75 percent of the largest mule deer herd in Nevada, sage grouse habitat, raptors and pygmy rabbits. GBRW noted in its Environmental Impact Statement comments that the expansion could draw roughly seven times the groundwater as the existing mine, affect seeps and springs in the area critical to wildlife, and shared concerns with other groups about habitat protection.

When the BLM’s Record of Decision for the expansion was released in July 2016, it selected the best alternative to mitigate impacts, other than the No Action alternative, which GBRW had recommended.

In January of 2016, Barrick sold the mine to Kinross Gold. We have been impressed by Kinross’ stewardship activities since the purchase. As noted in their Nevada Mining Association award for reclamation and wildlife restoration activities, their mule deer monitoring program is reviewed annually, and reclamation near a mule deer corridor was accomplished in record time.

On a site visit there in June, we noted that Kinross chose not to develop a road that intersected a migration corridor, and had removed multiple fences for sage grouse movements. Wetland monitoring of seeps and springs is occurring biannually; impacts to seeps and springs are not anticipated under the preferred alternative chosen by the BLM.

Above Photo: Tina Nappe and Susan Juetten with Haul Truck

Photo credit: Kinross Staff
GBRW and allies toured the Cortez Joint Venture complex in June 2017 to get a first hand look at the site of the proposed expansion. Cortez Joint Venture, in Eureka and Lander Counties south of Crescent Valley, is now one of the largest gold mining complexes in the world. Under this proposal, detailed in the Plan of Operations, it will become larger by thousands of acres.

Our readers and members will recall that GBRW has been supporting the Western Shoshone in trying to protect the spiritual/cultural area of and around Mt. Tenabo, now devastated by this mining complex. GBRW and the Western Shoshone filed suit in 2004 protesting exploration activities in Horse Canyon on the northeast side of Mt. Tenabo, and again in 2008 against the Cortez Hills Mine, which is on the south pediment area of the mountain.

Of most concern to GBRW in the current expansion plans is the increase in groundwater pumping that will be necessary for Barrick to deepen existing pits and the underground mines. The expansion involves expanding the open pits collectively by about 659 acres and deepening all of the pits. Indeed, this is a huge expansion. In addition to the expansion of all these mining areas, Barrick has also planned a new underground mine, Goldrush Project, that will begin in Horse Canyon on the north side of Mt Tenabo.

Deepening these mining operations will increase groundwater pumping. Barrick pumped about 34,400 acre-feet of water per year (AFY) in 2016, and this could increase to a maximum of about 55,700 AFY. Barrick earlier this year sought a ruling from the Nevada Division of Water Resources to transfer pumped water from the Crescent Valley Water Basin to the Grass Valley Water Basin. The transfer was necessary to restore water drawn from Grass Valley by pumping in Crescent Valley.

Of the water pumped, approximately 9 percent is consumptively used, i.e., removed permanently from the water basins. The remainder of the water is “returned” to the basin of origin, largely by using infiltration basins. These are large rectangular excavated areas resembling primitive swimming pools, where the water infiltrates (soaks) back into the ground. Construction and operation of infiltration basins has improved over the years; however, it is not clear how much of this water is restored to the deep aquifer of origin. The long-term effects of this kind of massive dewatering is unknown, but there are predictions of losses of seeps and springs including Shoshone Wells, that are of cultural value to the Western Shoshone.

In our scoping comments we discussed the effect of all the mining on the cultural aspects of area. As mentioned above, GBRW and the Western Shoshone have filed lawsuits trying to protect the area around Mt. Tenabo from the devastating effects of the mining there. Now we would like to see detailed accounting for the cumulative effects on cultural values of the area. We stated that the BLM (Bureau of Land Management) needs to solicit Western Shoshone input to fully investigate cultural losses. Shawn Collins, a Western Shoshone and key witness in our legal case, told GBRW that he will not return to Mt Tenabo; the mine has eliminated this sacred site for his spiritual practice.

The Cortez Joint Venture, Barrick’s premiere gold mine complex, has produced a total of 18.6 million ounces of gold since 1988; Barrick has estimated that there are at least 10.2 million ounces of proven and probable gold remaining. Given the richness of the gold deposit in and around Mt. Tenabo, it is clear why Barrick has gone to considerable effort since our lawsuits to neutralize Western Shoshone opposition to mining operations around Mt. Tenabo and elsewhere in Nevada. Ultimately, Barrick operations will virtually surround the mountain, and only the top of it is recognized by U.S. courts as a protected sacred site. Barrick has stated that it will never attempt to mine the mountain. In 50 to 80 years that is all that may remain of the Shoshone cultural area—the top of Mt. Tenabo.

References available upon request.
Supporters of GBRW and PLAN may recall a rally in Reno in 2015 supporting the years-long protests in Guatemala over Tahoe Resources’ (U.S. headquarters in Reno) Escobal silver mine.

In Guatemala and Canada dozens of legal cases have been brought and appeals. In July, Guatemala’s Supreme Court temporarily suspended the operating license for Escobal over issues of discrimination and lack of consultation with the indigenous Xinka people. Then the same court lifted the suspension in September, a decision that faces multiple appeals.

Military force used against peaceful protests near the mine by citizens from several municipalities in the southeast of the country has resulted in severe injuries. The local people are almost totally united in their opposition to the poisoning of their land and water from the mine, not to mention the real possibility of a permanent military presence among them. This situation is a perfect example of a project’s lack of “social license” to operate.

In Guatemala and Canada dozens of legal cases have been brought by the impacted people and their allies against Tahoe Resources. Over 65,000 people have participated in referendums.

In July, Nevada’s Republican Sen. Dean Heller wrote a letter on behalf of Tahoe Resources to Secretary of State Rex Tillerson. The Nevada Independent Online News reported that Heller asked Tillerson to “respectfully inquire…to ensure that American businesses are free from political reprisal. While the company has followed all the rules, they are suffering as are the people of the community supported by mining jobs and the economic boost provided by mining operations,” Heller wrote. We suspect the Senator was not informed of all the facts.

Neither federal nor state governments will take on responsibility for permitting a mine that proposes perpetuity treatment in its closure plan. Knowing this, virtually no company will submit a new mine plan that calls for perpetuity treatment. We are confronted with an impartiality dilemma, since most and typically all of the technical information about a proposed mine comes from industry paid consultants. Government agencies and to a greater extent public interest organizations like GBRW are hard pressed for the resources to do a parallel technical assessment. In general, all rely on data obtained by these consultants, and often modeling analysis is not done independently. Even if the conditions exist at a site where long-term treatment would be needed, how will the public know?

Our primary goal with the Phoenix mine is to only support actions which diminish the level of treatment needed in perpetuity. It is entirely possible that long-term treatment may not be avoidable, but there must not be any action that increases the likelihood of treatment in perpetuity. Currently, GBRW is very concerned that the proposed Phoenix expansion does not meet this goal.

Advocacy groups in Colorado are currently pursuing perpetuity treatment legislation. Colorado certainly has egregious examples of the need to address this issue. Maybe it’s time for Nevada to follow suit.

Please watch for action alerts on the Phoenix expansion on the GBRW website and Facebook page.
The proposed Mt. Hope Molybdenum Mine northwest of Eureka, Nev. remains on hold. On Dec. 28, 2016 the Ninth Federal Circuit Court of Appeals agreed with GBRW that the air quality analysis in the Environmental Impact Statement (EIS) for the mine violated the National Environmental Policy Act (NEPA). Impacts for several key emissions were based on a zero level background with no substantiation for using zero values for background. In addition, the court found that “cumulative air…does not comply with NEPA.” Due to these clear violations the Court vacated the EIS and the BLM Right of Way. As a result, Eureka Moly LLC does not have a federal permit to construct the mine.

GBRW also argued that there would be “Undue and Unnecessary Degradation” of surface and groundwater, and that the mine plan violated the Public Water Reserve law (PWR 107) by negatively affecting a number of publicly protected springs in the area. Since the Court already vacated the EIS it did not rule on our PWR argument. However, the court did direct BLM to clarify the situation with the springs in question.

Eureka Moly does not have valid water permits for the project either. The Nevada Supreme Court had previously ruled that the water permits for the mine violated Nevada law. During the 2017 Legislature a bill was advanced that would have given additional authority to the Nevada Water Engineer’s office. If passed the bill would have essentially made an “end run” around the Supreme Court decision. GBRW was one of many that spoke out against the bill, which would have also given a significant helping hand to the Southern Nevada Water Authority’s Las Vegas Water Grab. Only the Southern Nevada Water Authority and Eureka Moly spoke in favor of the bill.

The BLM is working on a Supplemental Environmental Impact Statement (SEIS) for the mine because of the issues we raised that were supported by the court decision, i.e., there must be a corrected air quality analysis. The SEIS needs to address the issues GBRW raised regarding the Public Water Reserves. Eureka Moly also needs to get its groundwater pumping permits approved at the state level to the satisfaction of the Nevada Supreme Court order.

Currently, Eureka Moly does not have solid financial backing, but the ore deposit at Mt. Hope is very large and we expect that General Moly (the parent company of Eureka Moly) will remain interested in mining the site. A shift in molybdenum prices could also trigger increased efforts to develop the mine. But without the required changes in the proposed mine plan GBRW will continue to oppose its development.

We will keep you posted about future actions that may need your support.

One win this session changed water law to require better accounting for consumption of water, including by the mining industries. However, we didn’t get all we wanted. The bill sponsored on our behalf, SB231, ran into mining industry opposition, who told legislators that their industry was being unfairly singled out. As a compromise GBRW and PLAN agreed to drop the “contentious” language and have the most important aspect folded into SB47, known as the “good water bill”, which passed. It is now required by law that all permitted water is included in the budget for each water basin regardless of whether the consumption is considered a temporary use or not.

SB298, the “bad water bill”, was defeated. It would have changed definitions in Nevada water law to make it easier for Las Vegas to import water from rural eastern Nevada.

Water issues cross over with mining reform and community health including issues such as pit lake water use, post-mining treatment of wastewater and groundwater pumping by the mines. Mines are second only to municipalities in groundwater pumping in Nevada. We are always working on some aspect of these issues, and we’ll be back at the Legislature with reform proposals in 2019.

Lithium mining, a hot metal these days because it is used in batteries, got a leg up with the passage of AB52.

We follow energy issues for obvious reasons; to preserve more of our public lands for people, habitat and water, and to combat climate change. There were wins and losses for alternative energy this session. See our website for a digest of important bills regarding mining, water and energy.

Learn more at www.gbrw.org/news
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AS WE GO TO PRESS...

MINING IN THE COMSTOCK

Significant developments regarding Comstock Mining (CMI) digging for gold in the historic Comstock District are coming to a head as we write this:

- Per Nevadagram #196: “CRA’s (Comstock Residents Association) public records lawsuit against Lyon County and CMI: Oral Arguments were heard at the Nevada Supreme Court on November 7. CMI was named in the suit because of the suspicions about Lyon County officials’ ‘below the radar’ meetings with company executives prior to the Lyon County Commissioners overturning the long-standing prohibition against pit mining within the Silver City town limits.”

- Also per Nevadagram #196: CMI, stocks falling to new lows, was about to lose the right to be listed on the NYSE, but a last-minute reverse stock split satisfied the NYSE minimum share price requirement (for the time being).

- CMI completed a Joint Venture Agreement with minor player Tona-gold (TNGD) in October, which they claim will give them the financial wherewithal to begin the permitting process to mine a pit within Silver City. This would be a disaster for the residents of this tiny but vigorous community.

Check out www.savesilvercity.org for the latest on these issues.

Thanks to David Toll and Nevadagram #196: http://bit.ly/2nr83uT