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April 3, 2022

Mr. Matt Kelley
Senior Planner
Nevada County Planning Department
950 Maidu Avenue, Suite 170
Nevada City, CA 95959-7902

Re: Idaho-Maryland Mine Project Draft Environmental Impact Report

Dear Mr. Kelley

The Friends of Banner Mountain (FBM) is a 501(c)(3) organization whose mission is to protect Banner Mountain and its natural and cultural resources for the benefit of residents, visitors, and future generations. We have reviewed the Idaho-Maryland Mine Project Draft Environmental Impact Report (DEIR) and provide our comments in the attached document.

For reasons described in the attached comments we believe that the DEIR does not provide an adequate assessment of the potential impacts of this project and does not provide sufficient evidence and analysis for the Nevada County Board of Supervisors to make an informed decision about the EIR and the proposed project.

FBM conducted a poll to assess support or opposition to the proposed project among our members; five respondents supported the project and 133 opposed it. Many of those respondents brought up the issues that we describe in the attached comments.

We believe that construction and operation of the mine will adversely affect the quality of life for residents of Banner Mountain for generations and we are hopeful that the Nevada County Board of Supervisors will not approve this project.

Thank you for this opportunity to share our concerns and comments about this project.

Sincerely,

Edward Sylvester, President
Friends of Banner Mountain

GENERAL COMMENTS

1. Mitigation Monitoring and Reporting Program and Maintaining Public Access to Monitoring Reports and Permit Applications

Mitigation monitoring and reporting is a required element for many of the impacts described in the DEIR; the various management plans cited in the DEIR also describe numerous monitoring and reporting requirements. As discussed on DEIR Page 2-4 these monitoring and reporting requirements will be summarized in the Mitigation Monitoring and Reporting Program (MMRP). The reporting requirements among the many mitigation measures and management plans described in the DEIR are diverse and we are hopeful that there will be clarity in the MMRP as to where and when these monitoring reports will be submitted.

We appreciate the way that Nevada County has provided a well-organized website at www.mynevadacounty.com during the DEIR process so that the public has easy access to review the DEIR and supporting technical studies. We request that Nevada County continue to maintain a project website to provide transparency and document accessibility for the public for the duration of construction and the 80-year permit term. The content of the monitoring reports is very germane to determining whether the proposed mitigation is working; therefore, Friends of Banner Mountain (FBM) and many residents of Nevada County would like to have easy access to those monitoring reports and permit applications without having to resort to Public Record Act (PRA) requests.

FBM is also concerned that Nevada County may not have adequate staffing and resources to track, review and respond to the many monitoring reports and permit applications that will be submitted. Because the information in these monitoring reports may trigger remedial action, it is important that the County have sufficient funding to support dedicated staff who will promptly enforce and oversee implementation of those remedies. It is not sufficient to rely on review and oversight by agency staff who will be reviewing permit compliance (e.g., Regional Water Quality Control Board, California Department of Fish and Wildlife). Agency staff are busy and under no obligation to provide monitoring reports to private citizens without a PRA request. We believe it is the County's duty to provide the public with easy access to these reports during construction and for the life of the project.

To address the concerns described above we have the following requests:

- a. Please develop a MMRP that includes information about:
 - The entity receiving the monitoring report or permit application (e.g., Nevada County Planning, Building or Environmental Health Department, or permitting agencies like Regional Water Quality Control Board)
 - The interval or triggering event for the submittal (e.g., quarterly, annually, or proposed mine activities such as preparing a Risk Assessment before storing explosives underground), and
 - Whether remedial action would be required if performance standards described in mitigation measures, management or monitoring plans are not met.

- b. Please provide a discussion in the FEIR addressing:
 - The County's proposed plan for providing public access to monitoring reports, permit applications and any technical studies that are produced during construction and operation for the duration of the 80-year permit.
 - The County's proposed plan to provide sufficient funding to support the County's sustained oversight and monitoring during construction and 80 years of operation.

2. Security/Bonds

As described on DEIR Page 4.6-24, the Surface Mining and Reclamation Act requires preparation and implementation of a Reclamation Plan and security in the form of a surety bond, trust fund, irrevocable letter of credit from an accredited financial institution, or other method acceptable to the Count to fund implementation of that plan. That is the only security mentioned in the DEIR; there is no discussion of insurance or security to ensure that the many DEIR mitigation, closing, and reclamation commitments will be fulfilled in the event of the applicant's financial collapse.

A review of Rise Gold Corp's July 31, 2021 Form 10-K and 10Q annual and quarterly reports with the U.S. Security and Exchange Commission (<https://www.risegoldcorp.com/financial-statements>) is not reassuring and indicates that the proposed mining operation is economically marginal and the anticipated gold revenue is speculative. If the applicant files for bankruptcy after impacts have already occurred, but before the mitigation is implemented, there will be no funds to provide remedial action and mitigation.

We understand that the County has engaged the services of a consultant to provide an independent economic analysis of the economic impacts of the mine, which we appreciate. That analysis will likely show substantial declines in property values, which is one of many concerns expressed by FBM members. However, we understand the scope of work does not include addressing the impacts of the project if mitigation cannot be implemented in the event of the applicant's financial failure and bankruptcy. The conclusions of a "less than significant" impact on many resources is based on implementation of the DEIR mitigation measures, but if there is no funding available to implement monitoring and remediation measures those less than significant conclusions would not apply. To address our concern's regarding the financial solvency of the applicant and potential failure to implement monitoring and mitigation please:

- a. Provide a discussion in the FEIR describing the proposed source of funding for implementing mitigation measures and remedial actions in the event of the applicant's financial failure and withdrawal from the project after impacts have already occurred. Ideally this would be in the form of security from the applicant, similar to what is described on DEIR Page 4.6-24, but also addressing the restoration and mitigation actions in addition to the required Reclamation Plan.

3. Project Schedule/Sequencing

Construction time estimates are an important element for assessing project impacts on traffic, air quality, noise, and other topics but the estimates are not consistent throughout the various technical section of the DEIR. The DEIR states in some places that the project is estimated to have a twelve-month construction phase, but also states that the construction of the water treatment facility alone would take eighteen months. Significant grading and underground development would be needed before initiating the eighteen-month construction of the water treatment facility, and that facility would need to be completed and fully operational before dewatering (a six-month process) of the mine could begin. After dewatering is complete, the new shaft for ventilation and emergency access would need be constructed to the 1000' depth by working upwards from below. Then, before beginning any actual new mining, the tunnels would need to be restored sufficiently to allow for construction of the underground rock crushing facility. All of these activities would need to happen sequentially rather than concurrently. The eighteen-month estimate of construction seems far too short a period of time to accommodate the sequential construction process. The estimate of construction duration needs to be consistent and as accurate as possible throughout the EIR sections to provide an adequate assessment of

impacts. In addition, the schedule needs to reflect the time required to secure the many required permits described in the DEIR. To address this issue, please provide the following in the FEIR:

- a. A revised project description (that will carry through in all EIR sections) that offers an accurate and consistent representation of all project components, including expected duration and sequence of each component, and incorporating the time required to secure the many permits identified in the DEIR.

SPECIFIC COMMENTS ON DEIR IMPACT ANALYSIS AND MITIGATION

4. Hydrology and Water Quality/Water Supply/Well Impacts

One of FBM's chief concerns about the project is that it could adversely affect local groundwater resources and wells for many of our members by dewatering the mine and lowering groundwater levels. The project area for the groundwater and well impact analysis should have encompassed the entire 2585-acre area under Banner Mountain where the applicant's mineral rights extend and where underground mining will occur rather than just the approximately thirty wells on East Bennett Drive.

The groundwater model that predicted impacts of the proposed long-term and sustained dewatering effort was calibrated based on pumping rates from the historical Idaho Brunswick Mine and only one 1956 water level measurement was collected from the flooded and inactive Union Hill shaft. We believe that using only one water level measurement from 64 years ago to calibrate the analysis for a complex bedrock aquifer system over a large region introduces a significant amount of uncertainty to the model, thereby making the model results inaccurate.

Data for the wells analysis came from private wells within a limited area and the data are old and cover just a few years. No usage data is provided, and critical data such as reduction in groundwater recharge from precipitation fails to include the 75 acres of low-permeable mine waste on the two sites. The groundwater model does not include the new access shaft, which would create a local area of groundwater drawdown and based on our review it looks like other existing mine features within a few hundred feet of the surface were also not evaluated in the ground water model. These mine features would contribute to the downward transmission of ground water from the near surface fractured rock areas. In addition, the groundwater model report assumes the geology in the area to be mined is homogeneous. Modeling that relies upon uniform rock, which is consistent from place to place, behaves in a more predictable fashion than rock that in bedrock systems having multiple faults and irregularities.

The mine water drains from several locations along Wolf Creek near Centennial Drive, and the DEIR provides only rough approximations of the mine water outflow rates from these areas. Furthermore, these outflow data are contradicted by more reliable records from previous studies which indicate ten times more outflow. Mine water inflow analysis is based on sparse mine water level data from the New Brunswick shaft and only 12 water level measurements were taken between 2003-2007, and three measurements in 2018-19. Please note that these measurements could be incorrectly interpreted; the water level reaches a limit when it exceeds the level of the drains from which the mine water flows and doesn't reflect would could be substantial inflow. Without a measurement of the outflow, the amount of inflow cannot be determined by the water level in the New Brunswick shaft.

The DEIR inappropriately defers to the future the collection of additional data via a Groundwater Monitoring Plan. The DEIR acknowledges that more groundwater level data is needed to assess the potential impacts of the proposed project on groundwater levels. Mitigation Measure 4.8-2(a)(4) (DEIR Page 4.8-67) states that this needed water assessment be conducted "once dewatering of the underground mine workings commences." However, once dewatering begins, it will be impossible to measure baseline levels which makes this mitigation measures ineffective.

The DEIR relies on fifteen monitoring wells to estimate impacts on water supply wells but does not explain how it arrived at this number of wells or their location, nor is an explanation provided as to why fifteen monitoring wells would be sufficient to estimate the impacts on all water supply wells around the mine area. In complex fractured bedrock spread out over thousands of acres, monitoring water levels at fifteen locations could not provide the needed data to ensure that groundwater impacts to hundreds of existing water supply wells in the project vicinity are identified and mitigated. Groundwater monitoring networks should be established in advance of the project, and the resulting monitoring information should be included in the FEIR.

Our members are very concerned about water supply and competition for groundwater for future residential wells in light of the impacts of the project and also from the effects of climate change. According to DEIR Page 4.11-51, water demand within the Nevada Irrigation District's (NID's) service area is expected to exceed supplies by more than 45 percent from 2025 to 2040 in Single Dry Years and by less than 10 percent from 2025 to 2040 during the first and second years of a Multiple Dry Year period. The surface water supply to NID will be subject to reductions during single and multiple dry years. The DEIR concludes that any water supply deficit can be addressed through NID's Water Shortage Contingency Plan, but this NID mitigation may not be possible if NID must limit its own allocations due to drought and climate change.

Based on our review of the DEIR and supporting technical studies, we believe that the DEIR does not provide adequate information about existing and future conditions of groundwater, water supply, and wells, and does not accurately assess potential impacts of the project on these resources. To remedy these deficiencies please provide:

- a. An updated and revised groundwater model to more accurately predict the extent of the well drawdown caused by the predicted 80 years of mine-dewatering and dewatered maintenance.
- b. A more accurate and comprehensive analysis in the FEIR that addresses the issues discussed above. The revised analysis needs to better reflect current and future site conditions and incorporate impacts of climate change to determine the extent and the severity of potential impacts upon groundwater resources, water supply and wells within the larger 2585-acre area under Banner Mountain.
- c. A revised and more comprehensive Well Monitoring Plan.

The DEIR does not adequately characterize the current mine water chemistry. The Hydrology Report (DEIR Appendix K.2, Table 4-10, page 120) uses discharge screening limits and data from the New Brunswick shaft to define water treatment criteria. However, a more accurate sampling of mine water would be from the drains located along Wolf Creek rather than from the New Brunswick shaft, as described in the analysis of mine water flow (see DEIR Figure 4.8-7). This figure shows water entering the New Brunswick shaft then flowing downward through the existing mineworks to exit the drains at Wolf Creek (e.g., Eureka drain, East Eureka drain). Only a few samples taken from the drains were reported, but these samples are much more representative of the mine water chemistry and indicate higher levels of iron, manganese, arsenic, aluminum, and zinc than the New Brunswick shaft samples (DEIR K.2 Tables 3-6). We believe that regular testing over time at the mine drains would provide a more accurate assessment of the contaminants flowing out of the mine under varying conditions, regular testing must be conducted over time at the Mine drains. To address this concern, we request that:

- d. Provide the results of water quality sampling at the drains located along Wolf Creek rather than the New Brunswick shaft to better define water treatment criteria and provide a revised assessment of potential impacts based on this new sampling data.

5. Hazards and Hazardous Materials

Chapter 4.7 (*Hazards and Hazardous Materials*) and Chapter 4.13 (*Wildfire*) concludes that the project would not impair implementation of emergency response plans, and that project impacts would be below the threshold of significance for Hazards and Hazardous Wastes (“*Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan*”). The paragraph below from DEIR Page 4.7-38 (with identical text on Page 4.13-17) is the only analysis in the DEIR about how 118 haul truck round trips between 6:00 a.m. to 10 p.m., seven days a week to State Route (SR) 20/49 via Brunswick Road, would affect emergency evacuation routes.

“In the event of an evacuation order in the vicinity of the proposed mine, such as an evacuation of residents off of Greenhorn Road, the incident command center would contact dispatch and direct them to contact the mine and request the mine operator to shut down the mine and cease all truck hauling operations.²⁰ While Brunswick Road is not a primary evacuation route, it would be the evacuation route used by residents of the Greenhorn Road area to evacuate to the primary evacuation route of SR 49/20. Ceasing haul truck operations during the emergency evacuation order would ensure that the proposed project would not have the potential to physically interfere with an emergency evacuation plan. Operation of the approximately 7.4 haul trucks per hour attributable to the proposed project could either be temporarily ceased and/or these trucks could pull off the road to enable residents to evacuate as quickly and expeditiously as possible. With the temporary cessation of mine operations, if directed by County dispatch, no further haul trucks would be entering Brunswick Road during an evacuation order. Accordingly, County OES has stated that the proposed project would not have a significant impact related to physically interfering with an adopted emergency evacuation plan.”

This conclusion is based on one conversation between Lieutenant Robert Jakobs, Emergency Operations Coordinator, Office of Emergency Services, Nevada County Sheriff’s Office, and Nick Pappani, Vice President, Raney Planning & Management, Inc., on January 5, 2021. The DEIR provides nothing more than this brief narrative on the course of action to be taken in the event of an evacuation off of Greenhorn Road, and relies on the opinion of Mr. Jakobs at County OES. However, no details other than the date are provided about the conversation between Mr. Jakobs and Mr. Pappani, nor can the reader determine what information was provided to Mr. Jakobs when he came to that conclusion of no significant impact on an adopted emergency evacuation plan.

Wildfire safety and evacuation routes are the number one concern for residents of Banner Mountain during fire season, which is now more than half the year. Brunswick Road and subsequent entry onto SR 20/49 is already a major evacuation bottleneck not just for residents evacuating from Greenhorn Road but also from Banner Lava Cap and Idaho Maryland roads, and would be worse with the additional mine truck traffic.

Chapter 5.6 (*Significant and Unavoidable Impacts*) already identifies a significant, unmitigated traffic impact to the Brunswick Road/Idaho Maryland Road, Brunswick Road/SR 174, and Idaho Maryland Road/Centennial Drive intersections, but there is no assessment of how this significant impact affects evacuation scenarios for Banner Mountain residents.

The DEIR offers no analysis quantifying how much worse it would be during construction and operation of the project and whether the additional traffic might physically interfere with an emergency evacuation plan. Banner Mountain residents are not reassured by skimpy and vague language in the DEIR that the incident commander would contact dispatch to request the mine operator to shut down the mine and cease truck hauling operations.

- a. Please revisit the conclusion of no significant impacts to implementation of evacuation plans with the following additional analysis and information:

- A more detailed analysis of the effects of project traffic during construction and operation on evacuations in any residential areas that might use Brunswick/SR 20/49 and Brunswick Road/SR 174 access for evacuation egress.
- Details on the process and timing of notification for mine shutdown and cessation of truck hauling operations. For example, what would be the trigger for notification that the mine needs to shut down and cease truck traffic? Would a voluntary evacuation order on Greenhorn Road carry the same weight as a mandatory evacuation order to trigger cessation of truck traffic? Would voluntary or mandatory evacuation orders in any area that might need to use Brunswick/S R 20/49 or Brunswick/SR174 for egress trigger a requirement to cease operations and truck hauling? The analysis needs to extend beyond those areas: *"In the vicinity of the proposed mine"* but rather include all areas where residents might need to use Brunswick Road/SR 20/49 or Brunswick/SR174 for evacuation. Please be aware that, depending on the location of the fire, thousands of residents on Banner Mountain and in Cascade Shores might need to use the Brunswick/SR 20/49 area for evacuation.
- Details on specifically who (title/position) would be contacted at the mine and confirmation that this person has the authority and means to immediately cease mine operations and truck hauling. Please also provide an estimate as to how long this notification and shut-down process would take and the effect of delays in shutting down truck operations on evacuations.
- Provide additional support for the conclusion that the project would not impair implementation of an emergency evacuation plan and that no mitigation is required. We believe that mitigation may be required and that a draft Wildfire Evacuation Plan should be prepared which provides the specific details we request above.

Our members are also concerned about the potential impacts of on-site temporary storage of mine waste material, which is not discussed in the DEIR. The DEIR does not provide sufficient information to demonstrate that mine waste disposal by off-site sales would be viable. The applicant proposes to sell waste rock on the open market if it is still being produced after the two proposed waste rock piles reach capacity. The market for aggregates varies significantly by season and during rainy seasons it might be necessary to stockpile the aggregate onsite. However, there are no provisions for onsite storage in the DEIR or an assessment of impacts related to such storage. Dispersing waste rock and other mine waste over large areas without containment often results in contamination but this potential impact is not assessed in the DEIR.

The Regional Water Quality Control Board (RWQCB) has jurisdiction over the disposal location requirements for mine waste rock to make sure discharges would not pose a threat to water quality, but there is no information in the DEIR acknowledging this approval process is required. Although the DEIR does not discuss this, the concept of selling waste rock may not be feasible and alternative disposal methods should be considered. The absence of provisions for temporary waste rock storage (and the associated analysis of its impact) creates strict operational constraints and potential impacts on all phases of processing, but this impact has not been addressed in the DEIR. To address these concerns, please provide the following in the FEIR:

- b. An analysis of the impacts of on-site storage of mine waste disposal and alternatives to off-site sales for mine waste disposal, and the impacts of those alternatives.

Management of asbestos-laden mined materials is not adequately addressed in the DEIR. Asbestos is likely to be released during underground blasting, crushing, and ore processing and during on-road transport, placement grading and compaction. The DEIR states that the Asbestos Management Plan would ensure that average mined material and engineered fill contains less than 0.01% asbestos. (DEIR Page 3-20). However, testing the asbestos content does not control the amount of asbestos in the actual material mined. To control the average amount of asbestos in output materials (and to avoid significant impacts related to asbestos exposure), but currently, the DEIR does not include any evidence that asbestos levels will not exceed this threshold. The testing process may

require up to two weeks before the results are known, yet the project would continue daily mining activities during this time. This daily mined material would have to be stockpiled while awaiting the test results, which could expose workers to dangerous levels of asbestos. Furthermore, if the running average of asbestos in the daily mined material exceeds the required threshold, batches containing higher asbestos levels would have to be stockpiled in order to be later mixed with batches having lower asbestos levels. The DEIR does not disclose this fact nor does it analyze the associated impacts. The mineral processing described in the DEIR does not address the need for stockpiling materials or address the likely impacts of such efforts. To address this concern, please provide the following in the FEIR:

- c. A revised Asbestos Management Plan that provides details on all of the steps necessary to safely manage this hazardous waste, including the location and organization of stockpiled materials, and safeguards to avoid fugitive dust emissions and potentially hazardous conditions.

6. Noise/Vibration

Many of our members choose to live on Banner Mountain because of the quiet and peaceful setting it offers, so potential noise and vibration impacts from the mine are a source of great concern. Some of the mine operations would generate noise levels of 85 dBA and begin early in the morning and extend into the evening, and some operations would occur 24 hours per day for 80 years. Tunneling and blasting would occur for 80 years, but DEIR does not identify the hours of these operations. The DEIR concludes that the project would not have significant noise impacts because they would comply with general County noise standards, but compliance with County standards is not the same as “less than significant” noise impacts.

In our quiet neighborhoods on Banner Mountain typically the only nighttime noises are the calls of Pacific chorus frogs in spring. But the DEIR states that because the project will comply with the County’s nighttime noise level standards, an evaluation of sleep disturbance is not warranted. We disagree with this assertion because the project includes many operations that will occur during early morning or nighttime hours, including dewatering, indoor facility construction, truck loading/unloading and off-site hauling mineralization processing, and water treatment. The combination of morning and nighttime industrial activities and low background/ambient noise levels could definitely cause sleep disturbance for many of our members.

The DEIR identifies mine development (tunneling) and gold mineralization production (tunneling and production blasting) as part of the project, but it does not identify the hours of operation for these project components. The DEIR states that underground exploration and mining would occur 24 hours per day, 7 days per week, and assuming that underground exploration and mining include mine development and gold mineralization production, tunneling and blasting could occur at night. If this is the case, the project’s noise and vibration impacts would be far more severe than the DEIR discloses.

Without explicit restrictions in the DEIR’s project description pertaining to the hours of tunneling and blasting, coupled with conditions of approval, the DEIR cannot simply assume that tunneling and blasting operations would not occur at night and would not adversely impact nearby receptors. The DEIR should have clearly identified the hours of mine development and gold mineralization production. The DEIR should have evaluated these impacts and identified and specified appropriate mitigation for nighttime noise.

The DEIR does not consider the absolute increase in noise levels compared to ambient background conditions. As described in the Salter Report (letter to Shute, Mihaly & Weinberger, from Salter Inc., dated March 9, 2022) certain operations could be 25-35 dB above background ambient noise levels. These noise levels would be perceived as more than four times as loud as the median ambient noise levels. The DEIR assesses these impacts as less than significant because overall noise from these operations would not exceed the County’s standards. The DEIR should have evaluated both the increase in noise level and the absolute noise level associated with the project.

Noise and vibration measurements were taken only at the Centennial and Brunswick sites and along the proposed pipeline location between the two sites. While processing would occur on these sites, tunneling and blasting would occur throughout the 2,585-acre mineral rights boundary under Banner Mountain. Tunneling and blasting could certainly result in excessive noise levels and vibration, but DEIR provides no evidence that noise and vibration impacts were measured throughout the entire mineral rights boundary. Many of our members live in areas immediately above or near the 2,585-acre mineral rights boundary, but the DEIR does not describe noise and vibration impacts to these residents. The DEIR should have disclosed the project's potential for noise and vibration impacts throughout the entire mineral rights boundary.

The DEIR does not adequately distinguish the project's construction-related noise sources from its operational noise sources. This distinction is very important because the DEIR asserts that the County's noise standards do not apply to construction-related activities. If the DEIR characterizes an operational activity as a construction project it may have incorrectly determined such impacts to be exempt from the County's noise standards and also determined the impact to be less-than-significant under CEQA. For example, the DEIR states that mine development (tunneling) would be constructed throughout the life of the mine which would require drilling and the use of explosives, and a new mine shaft would be developed on the Brunswick Site. These massive project components appear to be characterized as construction activities, but would potentially be extraordinarily noisy as they would require extensive drilling and rock excavation. If these activities are considered construction rather than operation, it inappropriately assumes the noise from these sources would be exempt from the County's noise standards.

The DEIR relies on varying thresholds for the project's traffic and on-site noise sources. It uses a numerical increase in noise only to determine the significance of the project's traffic noise impacts, specifying +5.0 dB or more as constituting a significant traffic noise impact. For on-site noise sources, it relies on the noise limits included in the Nevada County General Plan Noise Element and the Nevada County Land Use and Development Code. The DEIR should have assessed project's noise levels relative to the noise levels that residents actually experience (ambient noise) rather than to the County's standards.

The DEIR asserts that vibration from the project's blasting operations would be barely perceptible to nearby receptors. The DEIR identifies a 0.4 in/sec peak particle velocity (PPV) vibration limit based primarily on a vibration study performed following an underground nuclear blast in Mississippi in 1964. As described in the Salter Report, human responses to a single blast does not reflect the impact on the community from ongoing, perceptible and potentially unpleasant vibration over the 80-year lifespan of this project. The DEIR ignores guidance by the U.S. Office of Surface Mining and Reclamation and Enforcement:

All blasting must take place during daylight hours unless more restrictive times are specified. If night-time blasting is approved by the regulatory authority, it must be based on evidence from the operator that the public will be protected from adverse noise and other impacts.

The DEIR provides no evidence that the public will be protected from adverse effects from the project's blasting operations and does not include restrictions on blasting vibration during evening and nighttime hours. According to the Salter Report, residents could experience "strongly perceptible" and borderline "unpleasant" vibration as a result of blasting. This impact would occur for 80 years. The DEIR does not disclose this significant impact.

To evaluate the project's blasting-related noise impacts, the DEIR relies on noise measurements conducted at the Sutter Gold underground mine in Amador County. The Sutter Gold study found blasting noise to be 75 dBA, on average, at a distance of 200 feet from the mine portal. However, to translate those findings to the Project's Brunswick Site, the DEIR assumes that noise at the project site would be reduced by 20 dB compared to the Sutter Gold mine. Other than mentioning the difference in orientation and size of the portal, this claim of 20 dB noise reduction is unsubstantiated. As described in the Salter Report twenty decibels of noise reduction is a substantial change in noise emission. Without the unsubstantiated 20 dB of reduction, the Salter Report notes that the blasting noise at the nearest sensitive receptors would be between 72 and 77 dBA. As stated in the DEIR, ambient median and "background" noise levels at many sensitive receptors is between 35 dBA and 50 dBA. Therefore, the blasting noise could be substantially above the ambient noise levels, by approximately 25 to 40 dB.

- a. To address these concerns about noise and vibration impacts that would affect many of our members, please provide a revised analysis of noise and vibration that includes the following:
- Clearly identify the hours of mine development and gold mineralization production. If these operations occur at night or early in the morning, please evaluate the potential for noise and vibration to cause sleep disturbance and include appropriate mitigation for nighttime noise.
 - Evaluate both the increase in noise level and the absolute noise level associated with the project.
 - Assess the project’s potential for noise and vibration impacts throughout the entire 2,585-acre mineral rights boundary where many of our members reside.
 - Categorize each project component as either construction-related or operation-related and for each construction-related component provide details such as the construction-phasing plan, including the timing and duration of each and every project. This analysis should include each construction-project that is expected to occur over the project’s 80-year timeframe.
 - Evaluate the project noise levels relative to the noise levels that residents actually experience (ambient noise) rather than to the County’s standards.

7. Biological Resources

The foothill yellow-legged frog, a species listed as Endangered by the California Department of Fish and Wildlife (CDFW), could occur in the South Fork of Wolf Creek at the Centennial and Brunswick sites and also downstream of those sites. [Please note that the foothill yellow-legged frog is listed as Endangered under the California Endangered Species Act, not a Candidate for Threatened as incorrectly stated in DEIR Table 4.4-6 and on DEIR Page 4.4-37.] DEIR Page 4.4-37 states: “*The main stem of Wolf Creek within the Centennial Industrial Site is considered suitable habitat for this species*” and notes that it has been documented within 3.9 miles of the site. Then in the same paragraph the DEIR inexplicably characterizes the potential for this species to occur at the Centennial as “very low” despite the fact that suitable habitat is present. No protocol level Visual Encounter Surveys were conducted for this species at the Centennial site.

The impact analysis and proposed mitigation for foothill yellow-legged frog and for other special-status aquatic species like western pond turtle is focused on construction impacts rather than the operational effects of discharging mine water to the South Fork of Wolf Creek for 80 years. Potential impacts of mine water discharges on the aquatic life in the South Fork of Wolf Creek are dismissed by stating that these discharges would need to comply with Central Valley Regional Water Quality Control Board National Pollutant Discharge Elimination System (NPDES) No. CAG995002 and that monitoring of NPDES regulated parameters (e.g., temperature, pH, turbidity, dissolved oxygen) would be conducted to ensure the project stays within safe threshold limits identified within the NPDES discharge requirements. However, we are concerned that mine water discharges would overheat the South Fork Wolf Creek. Mine water ranges between 14 and 15 degrees Celsius, and NPDES requirement specifies that the discharge temperature not exceed existing temperature in the South Fork of Wolf Creek by more than 5 degrees Fahrenheit (2.8C). The DEIR provides a range of values for creek flow and temperature but it is based on just a few samples collected in April and August of 2019 and Jan 2020. More than 15 years of monitoring by the Wolf Creek Community alliance provides data indicating that the temperature of the creek often falls substantially below 10 degrees C, and that these temperatures commonly occur during low flow times. As described above, we are also concerned about water quality impacts and the effects that the

discharges will have on foothill yellow-legged frogs, western pond turtles and the benthic macroinvertebrates upon which these species and many others rely.

a. To address this concern, please provide the following information in the FEIR:

- A comprehensive assessment of impacts to foothill yellow legged frogs, western pond turtles and other aquatic life in the South Fork of Wolf Creek resulting from the discharge of mine water over an 80-year period. This assessment should be based on a detailed analysis of the water quality treatment processing and a comprehensive discussion of proposed water quality monitoring.
- Please also provide details on what immediate and long-term remedial actions would be taken if the NPDES water quality monitoring results indicate that NPDES thresholds are not being met. Please clarify whether mine operation and dewatering would cease until NPDES water quality thresholds are met, and if not, what the impact would be on continued water quality impacts on foothill yellow legged frogs, western pond turtles and other aquatic life in the South Fork of Wolf Creek.

A population of Pine Hill flannelbush, as species listed as federally Endangered and a California Rare Plant, was observed at the Centennial site. The DEIR states that 18 Pine Hill flannelbush plants would be directly impacted by proposed engineered fill placement at the Centennial Site. Mitigation for this impact refers to DEIR Appendix F.4, a Habitat Management Plan (HMP) for this species, and DEIR Mitigation Measure 4.4-1(a) indicates that only Steps 1-4 of the HMP would be required before issuance of a grading permit. HMP Steps 1-4 involve seed collection and transplantation. Step 5 (DEIR Page 4.4-65-66) requires more seed collection and transplanting if the Steps 1 – 4 are not successful, and also calls for:

“Habitat Enhancement: Prior to issuance of grading permits, pursuant to the HMP, the applicant shall enhance Pine Hill flannelbush habitat outside the disturbance footprint, which could include removal of invasive plants and conducting a pilot study by collaborating with CAL FIRE or other research facility to conduct prescribed fire in areas to enhance natural germination and recruitment, as Pine Hill flannelbush need fire for successful germination, and root sprouts.

Conservation Easement: Prior to issuance of grading permits, the applicant shall record a Conservation Easement for the on-site Pine Hill flannelbush avoidance area, or use a similar land protection mechanism that runs with the land in perpetuity, to protect the Pine Hill flannelbush plants within the avoidance area. The management guidelines for the Conservation Easement or similar mechanism shall require that the habitat be managed for the Pine Hill flannelbush and its associated habitat. The applicant shall also record a Conservation Easement or use a similar land protection mechanism for any offsite areas not owned by the applicant where the transplants are to be located.”

This mitigation measure is internally inconsistent; the Step 5 requirements for habitat enhancement and a conservation easement indicate that these measures should be implemented before issuance of the grading permit, but the language in the introductory paragraph of Mitigation Measure 4.4-1(a) indicates that it would be implemented only if Steps 1-4 are not successful.

We believe that all of the recommendations in the HMP should be implemented before issuance of the grading permit. Mitigation for impacts to this beautiful and rare plant should not be delayed and should not be mitigated solely by relying on transplants. Mitigation should focus on the more comprehensive and ecosystem-based approach described in the HMP to fully mitigate for project impacts rather than just relying on putting transplants in the ground.

Development of the habitat enhancement plan would be time consuming and will require extensive coordination with agencies such as CalFire, CDFW, and USFWS (and should also include the Redbud Chapter, our local California Native Plant Society) and therefore this collaborative effort should begin now. Waiting until after the monitoring results from the transplanting are available would delay development of the habitat enhancement plan and direct impacts to the Pine Hill flannelbush population at the Centennial site would go unmitigated for

years. The HMP should be revised to provide more details on the proposed habitat enhancement plan, what activities that plan would include, and an assessment of how enhancement activities would fully mitigate for project impacts.

The HMP should be revised to provide more details on the proposed conservation easement, including identifying entities that could serve as easement holders, an estimate of stewardship costs for ongoing management of the easement lands in perpetuity, and a source of funding for those costs. Such costs are typically calculated with a Property Analysis Record or some other tool.

The HMP (page 6-1) indicates that flannelbush seed collection was conducted on August 21, 2019 with Mr. Brett Hall from the UC Santa Cruz Arboretum as a part of the UC Santa Cruz Native Plant Program. The HMP should provide an update on the status of those seedlings so the public can have some assurances that the transplantation proposed as mitigation is on a successful trajectory.

- b. To address these concerns discussed above about mitigation for Pine Hill flannelbush, please provide the following:
- A revised Mitigation Measure 4.4-1(a) that calls for implementation of Steps 1 -5 from the Pine Hill Flannelbush HMP before issuance of grading permits.
 - A revised Pine Hill Flannelbush HMP that includes the additional details on habitat enhancement and conservation easements discussed above, as well as updates on the status of the seeds collected in August 2019.