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To: Members of the Nevada County Planning Commission, Nevada County Board of Supervisors, and Nevada County Planning Department Staff

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Comments on the Draft Environmental Impact Report for the Idaho-Maryland Mine Project

To All Concerned:

This letter is written on behalf of Community Environmental Advocates Foundation, The Sierra Fund, South Yuba River Citizens League, Wolf Creek Community Alliance, the state office and the Redbud Chapter of the California Native Plant Society, Sierra Foothills Audubon Society, Sierra Nevada Group Sierra Club, Friends of Bear River, Nevada County Climate Action Now, Brunswick Manor HOA, San Juan Ridge Taxpayers Association, Earth Justice Ministries, Elders Action Network, Patagonia, Friends of Banner Mountain, the Wells Coalition, Sierra Streams Institute, Brunswick Pines Road Association, Wawona Madrono Homeowners Association, the Center for Biological Diversity, and members of the Nevada County community at large who have identified many issues of concern regarding the potential reopening of the Idaho-Maryland Mine (Mine, Mine Project, or Project) Grass Valley.

As a coalition of community and environmental organizations in Nevada County, we appreciate the opportunity to provide public comment on the Draft Environmental Impact Report (DEIR) released by Nevada County for public review on January 4, 2022, addressing the environmental impacts of re-opening and operating the Mine for the next 80 years.

We are concerned about the long-lasting environmental impacts that the Mine Project would cause and the inadequacy of the environmental analysis of the DEIR. A number of key points are provided here. More detailed and complete comments from individuals and organizations are being submitted separately.

Note documents cited and submitted under separate cover:

- Baseline Environmental Consultant Report, Feb 15, 2022 (Baseline).
- Salter Report, March 9, 2022 (Salter).
- Comments on the Idaho-Maryland Draft EIR - 16Mar22, Center for Science in Public Participation (CSP2).

PROJECT DESCRIPTION

1 The DEIR does not adequately define the Mine Project to include the Centennial site and accordingly, fails to identify all potential impacts.

The DEIR fails to adequately address impacts associated with the Centennial Industrial Site (Centennial). This site is the location of hazardous waste left over from past Idaho Maryland Mine operations. The DEIR assumes that the Centennial site will be cleaned up before the use of the site for deposition of new mine waste. Yet the significant work which is needed to accomplish this clean-up is not disclosed nor evaluated in the DEIR. Rather, the DEIR assumes that the clean-up has already been accomplished, and uses the post clean-up conditions as the baseline for some of its environmental impact assessments.

The DEIR does not describe the current physical conditions of the Centennial site or include the necessary clean up of the existing contamination at that site as part of the Project because it assumes that Centennial will be cleaned up prior to the start of construction. As discussed above, the clean up for Centennial has not been approved by Department of Toxic Substances Control (DTSC) and it is unclear when DTSC might approve the clean up. Consequently, it cannot be excluded from this DEIR. As a result, any assumptions about baseline conditions for purposes of assessing impacts to the Mine Project are speculative at best, and at worst, significantly underestimate the actual impacts of the Project.

The current conditions of the Centennial site must be used as the DEIR baseline in order to meet the CEQA requirements for a full analysis of the impacts of the Mine Project. Moreover, the Centennial clean up should be included as part of the Project to address the whole of the action under CEQA. In order to accurately assess impacts, the existing conditions, or baseline, of the Project must be the current state of the Centennial site, not a speculative future condition.

2 Construction time estimates are inadequate and affect noise, traffic, air, and other impact areas.

Construction time estimates in the DEIR are contradictory and inadequate. For example, the DEIR states in several instances 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.

Furthermore, neither of these estimates - twelve or eighteen months - is sufficient to capture all phases of construction. As just one example, the applicant would have to complete significant grading and underground development before initiating the eighteen month construction of the water treatment facility. Similarly, the water treatment facility would have to be completed before dewatering of the mine could begin. Dewatering is a six month process. After dewatering has been completed, the new shaft for ventilation and emergency access would have to 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 must happen sequentially, not in parallel. Therefore, a more reasonable estimate of construction length for the Project would be four to six years, clearly resulting in significantly different annual and cumulative impacts than the ones identified in the DEIR.

The DEIR should be revised to provide an accurate description of each construction project, including its intended duration. This revised description must also include the sequencing of construction projects. Until this information is provided, the DEIR preparers will be unable to properly assess the annual and cumulative impacts on air, noise, traffic, aesthetics, and other resource areas.

3 The DEIR has not demonstrated that mine waste disposal by off site sales would be viable.

The DEIR indicates that the applicant (Rise) plans to sell waste rock on the open market if it is still being produced after the two proposed waste rock piles reach capacity (DEIR Project Description). The Regional Water Board has jurisdiction over the disposal location requirements for mine waste rock. Although the DEIR does not disclose this, the concept of selling waste rock is an unrealistic and infeasible proposal unless the Water Board has determined that such discharges would not pose a threat to water quality. Accordingly, the Project should not rely on this concept and the DEIR should identify all impacts associated with alternative disposal methods.

Even if the mine waste can be sold, the market for aggregates varies significantly by season. During rainy seasons, it may be necessary to stockpile the aggregate onsite, but there are no provisions for onsite storage in the DEIR or an assessment of impacts related to such storage. As reported by the Center for Science in Public Participation (CSP2), dispersing waste rock and other mine waste over large areas without containment often results in contamination (e.g., Calcine mercury mine tailings used for road construction in San Luis Obispo County). (CSP2)

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 have not been addressed in the DEIR. The DEIR should be revised to include an analysis of these impacts.

4 Mine waste and ore processing stockpiling: proposed processes may not be viable due to the necessary safeguard controls for asbestos.

(See "ASUR Plan Analysis.pdf", attached as a reference to this letter. Portions of that document are summarized here.)

The plan described in the DEIR for managing asbestos-laden mined materials is inadequate. Asbestos is likely to be released during underground blasting, crushing, and ore processing. It also is released during material handling, 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 3-20) Testing the asbestos content, however, 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), the DEIR must ensure that asbestos levels do not exceed this threshold. 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 calls for daily mining activity to continue 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. The DEIR does not disclose this fact nor does it analyze the associated impacts.

In addition, 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. The Asbestos Management Plan provided in the revised DEIR must detail all of the steps necessary to carry out the correct management of this hazardous waste, including the location and organization of stockpiled materials, and adequate safeguards to avoid fugitive dust emissions and potentially hazardous conditions.

HAZARDS AND HAZARDOUS MATERIALS

5 The DEIR inadequately describes potentially hazardous waste rock and mine tailings management.

As pointed out by Baseline Engineering Consultants (Baseline), the legacy contamination from prior mining indicates that the types of rock historically mined at the site contain heavy metals and, when excavated, these waste rock and mine tailings have been found to contain contaminants that pose a potential risk to people and the environment.

"Neither the DEIR Project Description nor the Hazards and Hazardous Materials section adequately describes how future waste rock and mine tailings generated by the proposed project would be managed to ensure that they do not pose a health hazard to people or the environment (as the placement of similar waste materials from the same mine did in the past)" (Baseline).

The revised DEIR must provide adequate information about the potential risks of the waste rock tailings and all potential impacts.

WATER QUALITY

6 Drill core testing for water quality impacts is inadequate.

Given the size and scope of the proposed Project, there was an insufficient quantity of drill core rock analyzed to determine the mine's true impact on water quality.

By way of illustration, between 2017 and 2019, the applicant drilled for, and extracted, a total of 67,500 feet of rock core. But of these 67,500 feet of drill core, only 0.68% were submitted for analysis. And of the few samples that were submitted for analyses, a dearth of information is provided regarding the sample materials' true weight, volume, particle size, and sampling technique. Nor are the drill logs for these core samples available for review, so the actual dates, precise locations, drift angles, widths, final depths, etc. are unknown. Several times the DEIR refers the reader to a "separate report" which will explain some of these omissions, but no such report is found in the document or its appendices.

In addition to the limited sample size and the inadequate sampling details, four different labs were employed to carry out the analyses of the submitted samples, but the samples did not have a proper chain of custodies (COC) processes. The COC is a process that tracks the movement of samples through their collection, safeguarding, and analysis lifecycle between the mine applicant and the labs, but the COCs do not reflect the written account found in the DEIR.

The revised DEIR must provide an explanation for the discrepancies in the chains of custodies for the samples submitted to labs and provide evidence that the samples are scientifically reliable.

This insufficient and unreliable data affects the accuracy of any analysis based on this data, such as an analysis of the metal leachate content of rock. Since metal leachate from mine rock affects water quality, analyzing metal leachate is one of the key concerns regarding the rock tailings produced by the Project. The limited amount of core material sampled and the imprecise manner in which the details of the core samples are reported makes the metal leachate analysis unreliable and leads the DEIR to underestimate potential impacts.

The revised DEIR should include a full set of data and drill logs that can be reliably analyzed by the public.

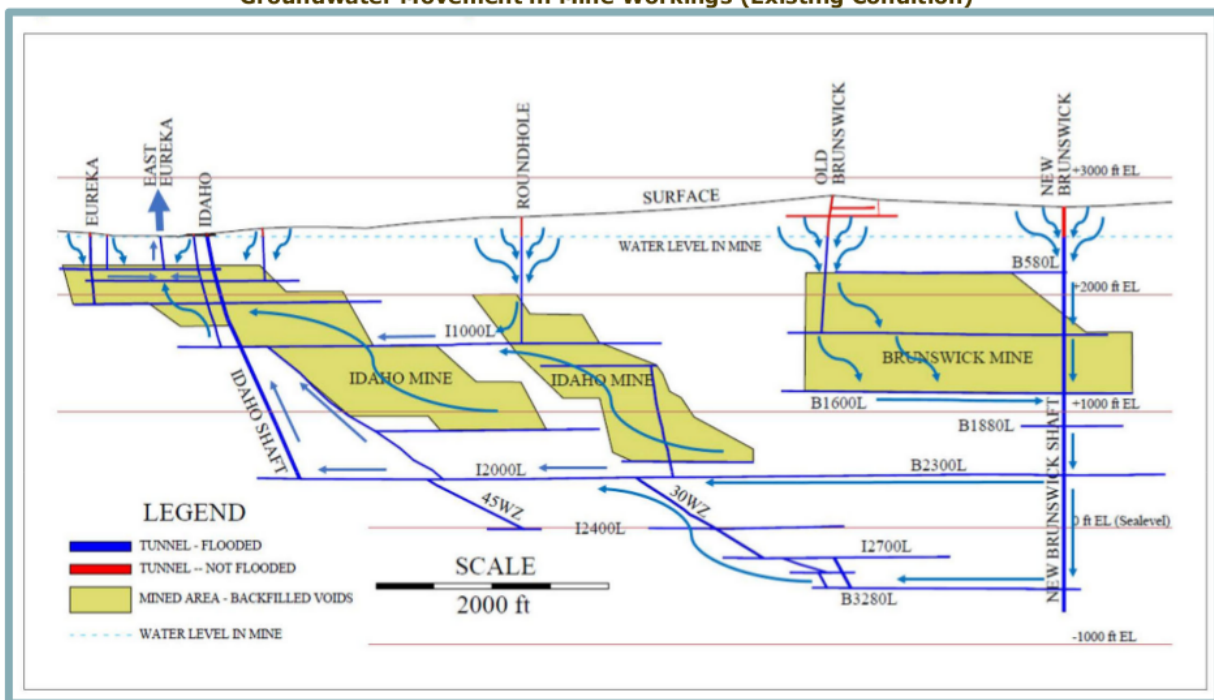
7 Assessments of the current mine water chemistry are inadequate.

The Hydrology Report (DEIR Appendix K.2, Table 4-10, p120) 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), which shows water entering the New Brunswick shaft then flowing downward through the extant mineworks to exit the drains at Wolf Creek (Eureka drain, East Eureka drain, etc). 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).

In order to get an accurate assessment of the contaminants flowing out of the mine under varying conditions, regular testing must be conducted over time at the Mine drains. The testing must also be conducted seasonally during differing rates of outflow. Moreover, in order to provide the public with a conservative estimate of potential impacts, the DEIR should use the results from the drain samples rather than the New Brunswick shaft, which would show potential water quality impacts from higher level of metals, arsenic and zinc.

Figure 4.8-7
Groundwater Movement in Mine Workings (Existing Condition)



8 The hydrology study incorrectly assesses the potential for long term acid mine type drainage.

The Empire Mine, adjacent to the Idaho-Maryland Mine, provides clear evidence of the potential for contaminants that could be discharged from the Mine and from tailings and mine waste intended to be deposited on the surface or back within the Mine as backfill. Mine water discharged from the Empire Mine has excessive levels of arsenic, iron, and manganese.

The EMKO hydrology study used in the DEIR dismisses the potential for acid drainage which could affect water quality in Wolf Creek. Instead, the DEIR claims “Any acid generated during the oxidation would be quickly neutralized by the carbonate minerals in the host rock” and cites neutral or high (non acid) pH values. (DEIR 4.8-49, 50) However, the short term method used by EMKO is not a reliable method for predicting the long term potential for contaminants to be discharged from mine waste. Results would be more reliable using long term tests, on the order of months rather than hours or days.

The waste rock’s potential to produce poor quality effluent should be thoroughly characterized using appropriate tests to the satisfaction of the Water Board (e.g., ASTM D 5744) over a sufficient period, also to the satisfaction of the Water Board (e.g., 40 weeks).

Accordingly, more extensive testing of mine waste rock and tailings must be conducted to assess the potential for contaminant leaching from mine waste. Long term dynamic testing must be conducted to accurately identify potential impacts to water quality. Due to variations in geology as mining progresses, repeated testing of the mine waste must be done.

The revised DEIR must specify how long-term monitoring of acid mine type drainage would be accomplished and identify mitigation measures capable of ensuring that any unanticipated contaminants do not adversely affect water quality. Without providing such testing and identifying feasible and effective mitigation measures, the impact must be identified as significant and unavoidable.

9 It is not adequate to defer analysis of mine waste, a potential hazard, to some future date without providing substantial evidence that the proposed actions will not result in environmental impacts.

The mine waste has not been adequately tested and one must conservatively conclude that it has a high potential for causing water quality impacts, given that similar local historic mining activities resulted in the detrimental environmental impacts that persist today. The DEIR fails to conduct the necessary impact analysis. Instead the document asserts that impacts will be remedied by obtaining an expedited General Order permit from the Water Board (DEIR section 4.8 page 50). As Baseline points out, this process is insufficient:

“It is not adequate to state that the project will get permits without providing substantial evidence that the proposed action will not result in environmental impacts, particularly when very similar historic actions have been demonstrated to result in environmental impacts that have persisted for decades.” (Baseline)

The revised DEIR must provide a valid and reliable analysis of the mine’s waste products and identify specific and achievable mitigation measures to assure these water quality impacts are reduced to less than significant levels. Alternatively the revised DEIR must identify such impacts as significant and unavoidable.

HAZARDS - AIR QUALITY

10 The DEIR provides no evidence that the project's long-term NOx, ROG, and PM10 emissions will be mitigated to a less-than-significant level.

The DEIR fails to adequately mitigate the Project's air quality impacts. It relies on a bare minimum of mitigation measures recommended by the Northern Sierra Air Quality Management District (NSAQMD) to address air quality impacts, and these measures only address emissions during a one year period of construction. As we explain above, construction will certainly last longer than one year. In addition, the mitigation measures do not address the long-term emissions that will result from 80-years of mining operations associated with the Project. As a result, there is no evidence that the Project's long term emissions have been mitigated to a less-than-significant level, as concluded by Baseline Engineering Consultants (Baseline).

The revised DEIR must identify feasible and effective mitigation measures that address emissions from 80-years of mining to ensure that emissions are kept at less-than-significant levels. Otherwise, the EIR must identify these long term impacts as significant and unavoidable.

11 The DEIR Health Risk Assessment uses invalid meteorological data to characterize emissions.

Toxic Air Contaminants (TAC) are toxins which may cause or contribute to an increase in death or serious illness from cancer and other acute or long-term diseases. (See Health Risk Assessment Critique (HRA Critique), attached as a reference to this letter.) TACs may cause health damage even at extremely low levels, and are generated by, among other sources, vehicles, off-road equipment, blasting emissions, and fugitive dust. TAC ingredients include particulate matter from diesel emissions, asbestos dust, silica dust, heavy metals, ammonium nitrate fuel oil, hexavalent chromium, and radon – all of which would be produced by mining activity, and which can become airborne, traveling on wind currents toward population centers around Nevada County.

The data used for the Health Risk Assessment model in the DEIR that relies on meteorologic information about the quality, quantity, speed, and direction of travel of air toxins is not appropriate for the Grass Valley area. The DEIR model relies on data from the Blue Canyon site, an area with a significantly different meteorological profile than that of Grass Valley. Blue Canyon, located on Highway 80, bears little meteorologic resemblance to Grass Valley: it deviates from Grass Valley in elevation, temperature, rainfall, snowfall, wind speed, and wind direction. Using Blue Canyon's meteorologic data does not correlate with Grass Valley meteorologic data under most circumstances, and makes any TAC statistic derived from the model unreliable.

The DEIR's Health Risk Assessment must be revised using meteorological data applicable to Grass Valley in order to accurately assess the potential health impacts of the mine's toxic air.

12 Drill core testing for airborne contaminants is inadequate.

As documented in “Sampling Procedures” (Sampling) (attached as a reference to this letter), TACs silica and asbestos are insufficiently described in the DEIR. Even though several hundred tons of rock would be mined and surface-stored each day, none of the core samples taken from the exploratory drill cores were tested for the contaminant silica. It also appears that when the original core samples were taken, drilling was stopped when serpentinite, an asbestos bearing rock, was encountered and, since drill logs are not available for review, the depth and width of the asbestos-containing serpentinite deposits encountered cannot be determined.

The rock types identified in the mineralized zone contain substantial amounts of silica (silicon dioxide, quartz), and the tailings would contain fine particles of respirable crystalline silica, a TAC. The laboratory that the applicant used for all metals analyses, ACZ Laboratories, is certified to perform both silica and silicon dioxide tests yet not a single sample was analyzed for these parameters (Sampling).

The revised DEIR should provide a full set of data about the samples analyzed for silica and asbestos. To the extent this data set fails to analyze silica and asbestos, further analysis and revisions of the DEIR are required to adequately identify impacts.

13 The management of fugitive dust after it leaves the mining facilities is inadequate.

In 1986, asbestos was identified by the California Air Resources Board (CARB) as a TAC. CARB also determined that there is not enough scientific evidence to identify an asbestos threshold level below which no significant adverse health effects are anticipated (17 CCR 93000, Implementation Guidance Document 2017, CARB pg 1), (HRACritique),

As a TAC, asbestos, as well as respirable crystalline silica, fall under the non-criteria air pollutant category because they lack an identified safe “threshold level below which no significant adverse health effects are anticipated.” There are no established limits for monitoring emissions of non-criteria air pollutants, silica and asbestos, into the ambient environment. The Health Risk Assessment is based on 30 years of exposure, so the cumulative effects from 80 years have not been addressed. Both silica and asbestos are inert substances not subject to environmental degradation that will have potential impacts beyond the 80-year project permit. (HRACritique)

The revised DEIR should establish asbestos mitigation protocols and robust monitoring systems of waste rock during transport and disposal to ensure the protection of workers and the public from the adverse health effects associated with the TACs, asbestos, and respirable crystalline silica. Without identifying clear and achievable mitigation measures, the DEIR must identify this as a significant and unavoidable impact.

HYDROLOGY AND WATER QUALITY

14 The proposed project would intentionally affect local groundwater resources.

The proposed Project would significantly affect local groundwater resources by dewatering the mine, lowering groundwater levels. The dewatered groundwater resources would be converted to surface water that is discharged into existing creek channels and quickly conveyed out of the area. The applicant's consultants have prepared a numerical groundwater model to attempt to predict how this proposed long term dewatering effort would affect overlying and surrounding groundwater levels.

An incorrect assumption was made in the groundwater model used to predict dewatering impacts, which led the DEIR to significantly underestimate groundwater drawdown, both in magnitude and areal extent. The groundwater model was calibrated based on pumping rates from the historical Idaho Brunswick Mine and only one water level measurement collected from the flooded (i.e., inactive) Union Hill shaft in 1956. Using only one water level measurement from 64 years ago to calibrate a complex bedrock aquifer system over a large region is inappropriate and introduces a significant amount of uncertainty to the model. (Baseline)

The revised DEIR must rely on a corrected groundwater model in order to accurately predict the extent of the well drawdown caused by the predicted 80 years of mine-dewatering and dewatered maintenance. Based on existing reports, the Project is likely to impact significantly more wells than the number of wells identified in the DEIR.(see "[Safeguards for Well Owners and the Idaho-Maryland Mine](#)", CEA Foundation) This is a significant impact that will affect hundreds of Grass Valley residents and must be addressed in a revised DEIR.

15 The basic constructs of the DEIR's groundwater model have significant errors and omissions making them unreliable.

The basic data needed to build a valid groundwater hydrological model are missing. The document "Review of the Idaho-Maryland Mine DEIR Groundwater Model" (Model Review) by Silberstein examines deficiencies in the model, as summarized here.

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. What's more, these outflow data are contradicted by more reliable records from previous studies which indicate ten times more outflow than the amount the DEIR discloses. (Model Review) Similarly, mine water inflow analysis is based on sparse mine water level data from the New Brunswick shaft. Only 12 water level measurements were taken at random times of the year between 2003-2007, and just 3 measurements in 2018-19). In addition, the utility of these measurements is 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 what 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. Essentially, no water balance assessment is provided.

Furthermore, data from private wells within the area is old and limited to just a few years. No usage data is provided, so seasonal variations in water levels are of limited use.

Critical data such as reduction in groundwater recharge from precipitation are also incorrectly calculated, failing to include the 75 acres of low-permeable mine waste to be dumped on the two sites.

Moreover, the groundwater model does not include the new access shaft, which would create a local area of groundwater drawdown. In fact, it appears that numerous existing mine features that are 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.

These are all elements that are critical for constructing a reliable groundwater model to identify dewatering impacts.

In addition, there are three major faults and numerous minor faults in the mineral rights area. These impact the transmission of water and introduce a high level of uncertainty in the accuracy of a model which, as stated in the Groundwater Model report (DEIR Appendix K.3), assumes the geology is homogeneous. Common assumptions such as the correct anisotropic ratio for the groundwater transmission calculations may not be accurate.(Model Review, 3.g.)

Taken together, the groundwater model is seriously deficient with respect to data reliability, initial conditions, and modeling assumptions, calling into question its ability to accurately depict the Project's impacts.

Finally, use of modeling in a fractured rock system has limited value. Modeling that relies upon uniform rock, which is consistent from place to place, behaves in a more predictable fashion than rock that is in bedrock systems having multiple faults and irregularities. It is critical to provide for long term monitoring and extended protections due to the challenges inherent in modeling groundwater in this complex hydrogeologic setting.

The revised DEIR must provide accurate and adequate information and comprehensive analysis to determine the extent and the severity of the impacts upon groundwater resources and wells. Without this analysis, the revised DEIR must identify such impacts as significant and unavoidable.

WELLS AND WATER MONITORING

16 The DEIR inappropriately defers the collection of additional water monitoring data to the future.

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 section 4.8 pg 67) states that this needed water assessment be conducted "once dewatering of

the underground mine workings commences.” This is internally inconsistent and would not be achievable. Once dewatering begins, it will be impossible to measure baseline levels. Consequently, this mitigation measure is impossible to implement. Mitigation measures under CEQA must be achievable, enforceable, and must be capable of actually reducing the Project’s impacts.

The DEIR inappropriately defers the collection of additional data (via a Groundwater Monitoring Plan) to the future. CEQA does not allow the deferral of important studies necessary to characterize impacts because it denies decision-makers the information they need to make well-reasoned decisions regarding the viability and impacts of a Project.

Groundwater monitoring networks will need to be established in advance of the Project, and the resulting data will need to be included in the revised DEIR. The consequences of not committing to full compliance with General Plan Policy 2.17 are dire for local property owners who rely on groundwater. (Baseline)

17 Relying on fifteen monitoring wells to estimate the impacts on all water supply wells around the mine area is inadequate.

The DEIR relies on fifteen monitoring wells to estimate impacts on water supply wells but it does not explain how it arrived at this number of wells or their location. In complex fractured bedrock spread out over thousands of acres, monitoring water levels at fifteen locations could not possibly provide the needed data to ensure that groundwater impacts to hundreds of existing water supply wells in the Project vicinity are immediately identified and mitigated (Baseline,p12).

The revised DEIR must provide reliable data regarding the Project’s monitoring regime in order to provide an accurate accounting of groundwater impacts.

18 Potential impacts to wells are underestimated and the proposed mitigations are inadequate.

The DEIR relies on a Well Mitigation Plan to allegedly protect wells from mining impacts. The Nevada County General Plan (Policy 17.12, item 1) states that:

*“In approving mining projects which **according to expert opinion** may threaten the existing quality or quantity of surface or subsurface water which supply adjacent homes and businesses:*

1) The County shall require the operator to guarantee a comparable supply of water to such homes or businesses through accessible forms of security or alternate sources of water. ”

In contrast to the opinion of the DEIR consultant EMKO (DEIR Appendix K.9, p1), numerous experts have stated that there is the potential for a significant threat to water supply for wells in the area beyond those identified in the DEIR. Notably, Baseline Engineering unambiguously states that, *“...it is Baseline’s expert opinion that the project may threaten the existing quality or quantity of surface or subsurface water which supply adjacent homes and businesses in a much wider area than is indicated in the DEIR.”* (Baseline)

The DEIR relies on a Well Mitigation Plan to purportedly protect wells from potential mining impacts. Yet, the Well Monitoring Plan does not demonstrate that impacts would be mitigated.

BIOLOGICAL RESOURCES

19 Proposed mine dewatering activities have the potential to have a significant impact on dependent biological resources.

The DEIR fails to adequately address biological and aquatic resources, and hydrological impacts to those resources.

The DEIR's biological surveys exclude an entire reach of South Fork Wolf Creek (SFWC). Species of special concern are inadequately considered and qualitative data for benthic macro-invertebrates (BMI) is missing. (Wolf Creek Community Alliance (WCCA), Benthic Macroinvertebrate Analysis, 2007)

Aquatic resources are excluded through an inaccurate hydrological assessment of the full length of SFWC, ignoring the connectivity of the creek upstream and downstream of the culvert on the Mine property, thus failing to consider the movement of trout and other aquatic species.

Hydrological impacts due to mine dewatering into SFWC are inadequately studied, mischaracterized, or not considered. The initial dewatering rate of 2500 gallons per minute (gpm) would be followed by 80 years of subsequent operational dewatering at 850 gpm and as much as 2500 gpm. The DEIR fails to adequately consider this long-term higher rate of discharge. Nor does the DEIR consider the seasonality of stream flow, loss of streambed or streambank habitat, changes in temperature, differences in Specific Conductance (EC), and habitat for BMI. Drawdown of the water table due to dewatering is also underestimated and its impacts to meadow, wetland, and forest habitats are not considered. Further, the DEIR fails to consider chronic and cumulative impacts to BMI, trout, and other aquatic species, including special concern amphibians. (WCCA)

Overall, because the DEIR does not adequately address biological and aquatic resources or sufficiently analyze hydrological impacts, this document must be revised.

20 Mine water discharges would overheat South Fork Wolf Creek.

Mine water temperature ranges between 14 and 15 degrees Celsius. The Project must not change the temperature of water discharged into the South Fork of Wolf Creek by more than 5 degrees Fahrenheit (2.8C) per NPDES requirements. (DEIR Appendix K.2, p108) Water from the mine will be pumped into the seven acre treatment pond. From there it will be run through the treatment facility and discharged into the creek. The DEIR's Hydrology study provides only a few data points (April and August of 2019 and Jan 2020) to determine the range of values for the creek flow and temp. However, over 15 years of monitoring by WCCA provides data

indicating that the temperature of the creek often falls substantially below 10C, and that these temperatures commonly occur during low flow times.

The revised DEIR must include studies that reliably predict the mine water's outflow temperatures from the treatment pond into SFWC. To do this, the EIR must include thermal modeling of the treatment pond, including the temperature impacts due to the treatment processing plant, flow through rates, cooling under different weather conditions, solar gain, evaporation, precipitation, etc. In order to avoid impacts to the SFWC and the species that inhabit the Creek, the revised DEIR must demonstrate that the discharge temperature and flow rates, combined with the temperature and flow rates of the stream over a range of conditions would not result in temperature changes in the stream in excess of 2.8C (5F) degrees.

GREENHOUSE GAS EMISSIONS AND ENERGY

21 The DEIR relies on an arbitrary threshold for greenhouse gas emissions.

The DEIR states greenhouse gas (GHG) emissions from mine operations would be just under 10,000 metric tons (MT) of GHG carbon dioxide equivalent (CO₂e) per year. This number was chosen as a bright-line threshold based on other air districts in California that included Placer County, Sacramento Metropolitan Area, the Bay Area and Southern California. Neither the Northern Sierra Air Quality Management District (NSAQMD) nor the County have adopted numerical thresholds of significance for GHG emissions that would apply to the Project. The DEIR does not discuss the justification provided by each air district for adopting the 10,000 MT CO₂e per year threshold, nor does it provide substantial evidence for applying this threshold to the project to demonstrate how it will achieve a fair share of the statewide GHG reductions goals for 2030 and beyond.

The DEIR must be revised to identify and provide justification for a GHG threshold of significance that will achieve the statewide GHG reductions goals for 2030 and beyond over the proposed 80 year lifetime of the mining permit. (Baseline)

22 The DEIR underestimates GHG emissions from haul trucks.

The DEIR states that the Centennial Industrial Site will be used for mine waste dumping to form "engineered fill" during the first 5 years of mine operations. The DEIR's analysis assumes that the Centennial Site remediation to remove toxic mine waste would be completed before the mine opens. However, since the remediation of the Centennial Site is not included in the DEIR analysis and, as indicated in the Project Description, may not be completed in any specified timeframe, "...it is speculative at best to assume that the Centennial Industrial Site will be available for fill placement." (Baseline)

To accurately account for the Project's GHG emissions, the DEIR should have assumed an additional five years of offsite hauling at the beginning of operations. This additional hauling would generate significantly more emissions than disclosed in the DEIR. This also holds true for criteria air pollutants as well.

The GHG emission should be updated in the revised DEIR to include the prospect of the Centennial Site being unavailable for mine waste dumping.

23 Mining energy requirements would eliminate gains attained through the Nevada County Energy Action Plan.

The Nevada County Energy Action Plan calls for a 51% reduction in GHG emissions for electricity use by 2035, which is in close alignment with state goals. The Plan calls for residential energy reduction savings from building efficiency of 42 million kilowatt hours per year (kWh/Yr).

The DEIR states the amount of electricity required to operate the mine would be approximately 49 million kWh/Yr (DEIR p. 4.3-59), which would erase any residential electricity savings attained by the Plan.

The total non-residential electricity use of the county in 2017 was 53 million kWh/Yr. So, GHG emissions from this one mining project alone would almost equal all other non-residential electricity use in the County and wipe out the projected 9 million kWhYr non-residential building efficiency savings.

Asking residents and business owners to cut down on their use of electricity while allowing the GHG emissions from the mine would be highly counter-productive and unfair. The DEIR must explain how the project intends to comply with the emission goals of the Nevada County Climate Action Plan.

The California Air Resources Board 2017 Climate Change Scoping Plan stated: "Achieving no net additional increase in GHG emissions, resulting in no contribution to GHG impacts, is an appropriate overall objective for new development." Given these facts, the DEIR must establish a net zero threshold for new GHG emissions from the Project and declare the project has significant and unavoidable impacts.

NOISE AND VIBRATION

24 Nighttime Noise Impact is Not Adequately Addressed.

The analysis "Acoustical Comments on Draft Environmental Impact Report, Salter Project 22-0039" (Salter) provides comments on the DEIR's analysis of the noise and vibrations for the Project.

Salter determined that nighttime noise is not adequately addressed in the DEIR. The DEIR outright dismisses the potential for noise impacts due to sleep disturbance and inappropriately excludes this consideration from the DEIR analysis. The combination of nighttime industrial activities amongst a community that currently enjoys low ambient noise levels represents a significant risk for Project noise to impact the community, annoy residents, and cause sleep disturbance.

A revised DEIR should provide a comprehensive analysis of nighttime noise impacts, identify these as potentially significant impacts, and identify appropriate mitigation, including limitations on nighttime noise, to protect nearby residents. (Salter)

25 Engineered Fill Operation Noise is Underestimated.

The DEIR underestimates operational noise from the Project's engineered fill operations (Impact 4.10-2). This 5 to 6-year long activity could generate noise levels at least 10 to 18 dB higher than predicted in the DEIR. This is a significant deficiency in the impact analysis. As such, the project's noise levels could be 20 to 35 dB louder than current median/background ambient noise levels, causing a severe impact. In addition, in several instances, the DEIR fails to adequately address impacts to sensitive receptors located farther away from existing roadways that currently have a lower background noise (Salter). The DEIR must be revised to correct these deficiencies and omissions.

26 Blasting Vibration Impact is Not Adequately Addressed.

The DEIR fails to adequately evaluate blasting vibration impacts (see Impact 4.10-4). Blasting operations have the potential to subject nearby residents to "strongly perceptible" and borderline "unpleasant" vibration on a regular basis for the rest of their lives. These perceptible and unpleasant vibrations must be considered a significant impact in the DEIR.

In particular, the DEIR fails to include crucial guidance from the U.S. Office of Surface Mining Reclamation and Enforcement Blasting Guidance Manual restricting blasting vibration during evening and nighttime hours. If blasting must be allowed at these sensitive times, the DEIR must incorporate adequate mitigation with a notably stricter limit at all sensitive receptors (Salter).

HAZARDS

27 Potential mine flooding and worker safety from groundwater occurrence in mine workings.

In the DEIR's discussion of the Union Hill Mine, it is noted, "The Union Hill Mine workings are within 95 feet to 180 feet of workings of the Brunswick Mine at three to four different levels. During the post WWII period, the combined Idaho-Maryland Mine workings were completely dewatered. In 1956, the water level at the Union Hill Mine was reported to be within 20 feet of

the top of the shaft, suggesting that the complete dewatering of the adjacent mine workings resulted in no more than 10 to 20 feet of water level decline in the Union Hill Mine.”

There are two important points to note in this discussion, (1) the Union Hill Mine is very close to the Idaho-Maryland at several levels; and, (2) there has been a possible weak hydraulic connection between the two mines, which is only logical.

There is no discussion in the DEIR of the potential impacts for the Idaho-Maryland Mine if flooding were to occur during mining. According to ITASCA's report (DEIR Appendix K.3, Figure 2-3), there are extensive abandoned mine workings above and adjacent to the Idaho-Maryland Mine that would remain flooded after the Idaho-Maryland is dewatered. If a conduit between these two mines were to open, for instance due to the widening of a fracture related to blasting vibrations or a seismic event, the flood of water into the Idaho-Maryland could be rapid and catastrophic for anyone working in the mine.

The DEIR must be revised to evaluate the potential risks of flooding during mining operations, including potential risks to mine workers. (CSP2)

28 Voluminous updraft from Mine ventilation air discharge may condense to form a water vapor cloud or fog resulting in a potential air traffic hazard.

The mine ventilation system would discharge 200,000 cfm of saturated air at 68F degrees from the top of the headframe with an upward velocity of 7.7 ft/sec. The headframe is located within the airport safety zone. Under some weather conditions, this large volume of air exhaust may form a persistent cloud plume, or fog, which could be a potential visibility hazard for aircraft. Also, the large mass of air moving upwards may create turbulence. In addition to aesthetic impacts, the DEIR should assess the potential hazards to aircraft of this large volume of saturated air (see MineExhaustMoisture report, attached as a reference to this letter).

29 The DEIR's evaluation of seismic hazards due to faults and mining is inadequate.

The mine project would target potential ore bodies that are more or less bounded by the Morehouse fault, the 6-3 fault (Weimar), and the Idaho fault, as well as numerous lesser faults. While the faults in this area are designated as being in a type C fault zone, with low seismicity and a low rate of recurrence, the DEIR does not analyze the effect that a seismic event would have on the mine or workers in the mine. (For further details, see FaultingHazards, attached as a reference to this letter) .

Throughout the 80 year life of the proposed project, expansion of mine works will remove 30 million tons of rock mass, and change the overall competency of the surrounding bedrock. In addition, several million tons of mine waste will be positioned over or near the faults. Finally, at

the end of mine operations, the mine will re-flood, leading to an additional potential increase in seismic activity due to the re-introduction of hydrostatic pressures. (FaultingHazards)

The seismic reports discussed in the Geology section of the DEIR are not up to date and, even if updated, would not meet the requirements for a probabilistic seismic site analysis. (CSP2, p7)

The revised DEIR must include a complete and comprehensive analysis of the potential hazards due to seismic activity as a result of the Mine Project.

Conclusion

The DEIR lacks critical information necessary to identify all potentially significant impacts associated with a large underground mining project close to a populated area with complex groundwater and geologic conditions, and accordingly, fails to comply with CEQA requirements. As detailed above:

- The toxic legacy of the Idaho Maryland Mine at the Centennial site is incorrectly assumed to be already remediated in the DEIR for five resource areas, which leads to an underestimation of impacts, particularly in biology and hazards impacts;
- Health issues due to air quality and noise impacts are vastly underestimated;
- There is no proposal for managing the stockpiling and containment of waste and related runoff on site;
- The DEIR defers analysis of mine waste analysis;
- Asbestos and silica release are not evaluated;
- The groundwater model has significant errors, omissions, and is unreliable leading to a gross underestimation of groundwater and well impacts to nearby residents;
- Well monitoring is inadequate to evaluate impacts to the hundreds of existing wells in the project vicinity.

The DEIR lacks an accurate project description, lacks data and analyses needed to make informed determinations, and fails to provide effective and feasible mitigation measures. For these reasons, the document is inadequate under CEQA. The DEIR should be revised and recirculated to comply with CEQA.

(Signatories below)

Sincerely,



A handwritten signature in black ink, appearing to read "Ralph Silberstein".

Ralph Silberstein
President, CEA Foundation



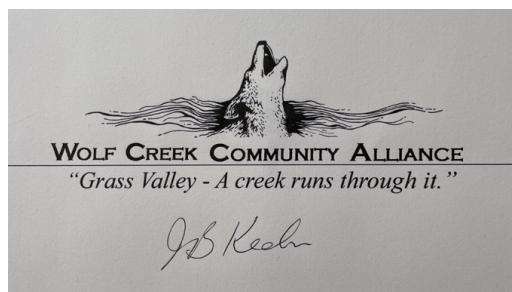
A handwritten signature in blue ink, appearing to read "Daniel R. Ketcham".



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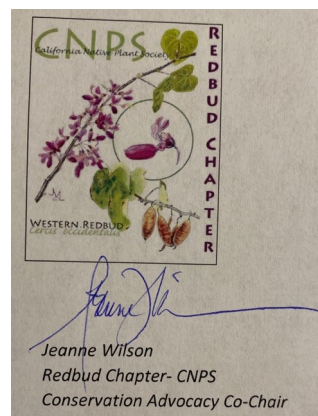
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***** References*****

Documents attached as a reference to this letter:

- Review of the Idaho-Maryland Mine DEIR Groundwater Model.pdf
- MineExhaustMoisture.pdf
- FaultingHazards.pdf
- ASUR Plan Analysis.pdf
- Health Risk Assessment Critique.pdf
- Sampling Procedures.pdf

Documents cited and submitted under separate cover:

- Baseline Environmental Consultant Report, Feb 15, 2022 (Baseline).
- Salter Report, March 9, 2022 (Salter).
- Comments on the Idaho-Maryland Draft EIR - 16Mar22, Center for Science in Public Participation (CSP2).