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Tod Herman
Nevada County
Eric W. Rood Administrative Center
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Dear Mr. Herman:

The Nevada County Planning Department has requested comments on San Juan Mining Corporation's application to re-open the San Juan Ridge Mine, located north of Nevada City in Nevada County, California. Following publication of an EIR in 1993, Siskon Gold Corporation, under the management of Tim Callaway, conducted active underground excavations at the site from 1994 to 1997. During operations, the mine hit a fault that caused both a massive flood in the mine and dewatering of a number of local wells. The mine closed in 1997. Almost 20 years later, the newly formed San Juan Mining Corporation proposes to re-open the mine.

Below are the comments of the San Juan Ridge Taxpayers Association on the application and the environmental review process for the proposed mine project.

The San Juan Ridge Taxpayers Association is a membership organization that has been representing taxpayer interests, including land use issues that affect quality of life on the San Juan Ridge, since 1974. The San Juan Ridge Taxpayers Association membership includes property owners who will be directly affected by the mine, residents whose water supply will be directly affected by the mine, as well as members downstream of the mine and people who are simply concerned about impacts of the mine on areas where they hike, fish and swim, take educational walks, and enjoy in other ways. SJRTA members also include those who pay taxes that go toward mitigating impacts of past mining activities on our local school.

SJRTA and its members have great concerns about the proposed mine. When the mine was last open, mine dewatering radically exceeded the amount predicted in the EIR prepared for the project. Up to 15 wells were impacted, 11 of which needed to be replaced or deepened. Among these 11 were the two that provided drinking water to our public school. Some of the replacement wells drilled by the former permittee do not meet California water quality standards and so must be filtered or treated at the landowner's expense, now that bond money has been depleted. In the case of the school, ongoing costs of water treatment have been borne by the taxpayer.

The amount of water to be pumped out of the San Juan Ridge Mine during all phases of the newly proposed project represents a huge percentage of the total amount of groundwater extracted from the entire county. According to the USGS's "Estimated Use of Water in the United States County-Level Data for 2005," the total amount of groundwater extracted from Nevada County in 2005 was 21.02 million gallons per day. The total amount pumped by private wells for non-agricultural domestic uses is 11.81 million gallons per day. The documents provided by the applicant show estimates of 2.3 to 2.6 million gallons per day to be extracted during the initial 45 days of the proposed mine opening, followed by extractions of up to 3.6 million gallons per day during proposed mining itself. In addition to removing water from the aquifers where it is needed, the new project's dewatering also has the potential to flood local creeks where populations of rare amphibians rely on pools and slow moving water during late spring and early summer seasons. The proposed mine will also cross several new fault lines similar to the fault that caused the Siskon mine to flood and to dewater wells. At the rates of pumping planned, the proposed project alone would consume 16 percent of Nevada County's average daily 2005 groundwater withdrawals. This is a huge impact for one mine to have on our local water supply.

A new EIR must address the initial dewatering of the proposed mine as an issue separate from the eventual constant pumping necessary to keep the mine functional. A report should be prepared that estimates the total volume of water to be removed, in what time frame, and how the operator expects to dispose of that volume of water. Initial dewatering will drain a significant portion of the nearby aquifer as well, as the water being removed makes way for new water drainage from nearby areas. The resulting initial dewatering will remove an even greater quantity of water than that which currently fills the existing mine tunnels.

Because of the extent of permit violations under the Siskon permit, the change in ownership of the mine, and the lack of accountability resulting from that change, as well as the many changed environmental circumstances, and the new information available now that was not available when the last mine was planned, we believe that the current application must be evaluated as a new project. The project itself is not merely maintaining what went before: it is beginning from square one. The project involves beginning with dewatering at levels much higher than those assessed for dewatering in the EIR for the previous mine; excavations would occur in new areas which cross known faults and present entirely new risks of inundation and impacts to aquifers and wells not impacted by the last project. The applicant suggests new methodology to avoid the gross errors of the past project, yet provides no evidence that such technology has been tested and found successful. In short, this is a new project with new impacts, and the people whose wells, human environment, and quality of life may be affected deserve a chance to weigh in on the proposal as it stands today with the information that has come to light over the 19 years that have passed since the previous mining project at this site was initially approved. It is also important to note that a 1996 hydrology report prepared for the previous project predicts a rate of constant dewatering which is likely unsustainable even without additional catastrophic water loss in another encounter with a flooded fracture.

I. The Proposed San Juan Ridge Mine Project May Cause Significant Impacts To The Human Environment, Which Requires Preparation Of An EIR Under CEQA.

The proposed re-opening of the San Juan Ridge Mine project is a new project that would have numerous potentially significant impacts on the environment and human beings on the San Juan Ridge, particularly in the vicinity of the mine. Under the California Environmental Quality Act, these impacts must be addressed in an EIR.

In the past, the mining project at this site had numerous unanticipated impacts. The mining activities proposed to be completed during the next phase are significantly more expansive than those completed during the prior project. These are two factors that make the mining proposed in the new application a different project than that contemplated in the original EIR. In addition, there is now an abundance of new information and data from the proposed mining site (including unforeseen impacts to wells and aquifers that occurred during the previous project) that was not addressed in the initial EIR, as well as a host of new information and regulations concerning the physical environment affected by the proposed mine. This information has not been adequately disclosed or presented in the current application.

The California Environmental Quality Act (CEQA) requires the preparation of an EIR whenever a public agency proposes to approve or carry out a project that may have one or more significant impacts on the environment (§§ 21080, 21100, 21151).

The fundamental purpose of an EIR is "to provide public agencies and the public in general with detailed information about the effect which a proposed project is likely to have on the environment." (§ 21061). To that end, the EIR "shall include a detailed statement setting forth all significant effects on the environment of the proposed project."

A. The proposed mine has the potential to result in significant impacts to domestic water supplies.

The massive dewatering proposed is likely to have significant impacts on domestic water supplies. As stated above, the mine proposes a rate of water pumping that equals approximately 16 percent of the daily groundwater usage for the entire county. This amount is only an estimate, based on the assumption that there will be "… no significant change in bedrock inflow, and no repeat of the magnitude of the F6 fault encounter as future faults F5, F3 and F2 are crossed, …" (*Hydrologic Study of Ground-Water Impacts from Mine Dewatering at the San Juan Ridge Mine, June, 1996, Luhdorff and Scalmanini Consulting Engineers, Woodland, CA,* at 67). In other words, the rate of dewatering could be even higher than this.

The EIR must address the impacts of this dewatering, including the ability of the applicant to provide adequate remedial water in quantity and quality to surrounding residences should the new pumping program affect neighboring wells, and to successfully

dispose of water pumped from the mine without serious environmental side effects. Further, the EIR must address the longer-term effects to the aquifer and availability of groundwater in the affected area of sustaining this rate of pumping into the indefinite future. The impacts of this rate of pumping are likely to be significant, and must be evaluated in an EIR.

On a general level, section 15144 of the CEQA Guidelines (Cal. Code Regs., tit. 14), addressing the need to forecast future events in an EIR, states that "[w]hile foreseeing the unforeseeable is not possible, an agency must use its best efforts to find out and disclose all that it reasonably can." (Guidelines§15144), explaining that an EIR must address the impacts of "reasonably foreseeable" future activities related to the proposed project.

Courts have specifically addressed the sufficiency of an EIR's analysis of water supplies in the context of mining and other projects. In *Santiago County Water Dist. v. County of Orange* (1981) 118 Cal.App.3d 818, 173 Cal.Rptr. 602, the EIR for a proposed mining project stated that the mine would consume 12,000 to 15,000 gallons of water daily and that the local water district would supply it, but the EIR provided no information as to the impacts on water service elsewhere of supplying that amount of water to the mine (*Id.* at pp. 830-831, 173 Cal.Rptr. 602). The Court of Appeal held that without any "facts from which to evaluate the pros and cons of supplying the [needed] amount of water" to the mine (id. at p. 829, 173 Cal.Rptr. 602), the EIR was inadequate.

The proposed project would involve a great deal of pumping, which is very likely to affect water supplies, and an EIR should address not only potential impacts in the initial period, but effects of this rate of water removal into the indefinite future, including impacts on water service elsewhere.

To meet its legal burden under CEQA, the water supply section of an EIR for a development must meet the four standards set out by the California Supreme Court in *Vineyard Area Citizens for Responsible Growth v. City of Rancho Cordova*, 40 Cal.4th 412, 430-432 (2007):

(1) Decision makers must be presented with sufficient facts to evaluate the pros and cons of supplying the amount of water that the project will need;
(2) The analysis cannot be limited to the first stage or the first few years;
(3) Future water supplies identified and analyzed must bear a likelihood of actually proving available…
(4) If it is "impossible to confidently determine that anticipated future water sources will be available, CEQA requires some discussion of possible replacement sources or alternatives to use of the anticipated water, and of the environmental consequences of those contingencies.

See also *Santa Clarita Organization for Planning the Environment ("SCOPE") v. Newhall Land and Farming Co.*, 157 Cal.App.4th 149, 158-159 (2007).

The potential impacts of water pumping, and the ability of the aquifer and domestic water supplies to sustain the level of pumping required by the mine over the period contemplated by the applicant, must be assessed in adequate detail in an EIR.

The previous Siskon Gold mining operation led to the dewatering of 11 wells and impacted at least 4 other wells. After the water-bearing fracture was disrupted by the mining operation, the company was unable to curtail the dewatering and subsequent lowering of the aquifer for more than 4 months. This slow reaction time led to several mitigation wells having to be drilled more than once and unnecessary water quantity and quality impacts on local creeks.

Although Siskon Gold Corporation drilled new wells in the mitigation efforts, some of these new, deeper wells were impacted by impaired water quality. Notably, high iron, manganese, nickel and aluminum levels were recorded above drinking water standards in some wells. Furthermore the costs of pumping at deeper well depths and the need for water filtration and treatment for well water from some replacement wells have led to ongoing costs that continue to this day, 14 years after mitigation efforts ended.

It should also be noted that the dewatering event of 1995 and 1996 occurred during a wet water year where 73 inches of precipitation was reported from November to May, well above the 53 inches that are average for this location. It can be assumed that the fairly quick recharge of the aquifer that occurred, after the fault was sealed with a massive concrete plug in 1996, would not have been so complete if the area had been impacted by a drought year. In addition, the population in the area has also increased since the previous mining operation. Many new houses have been built and it must be assumed that many new wells have been drilled, creating further strain on a fragile aquifer and additional domestic water sources that may be impacted by the proposed project. These issues of recharge and the strain on the aquifer must also be evaluated in a new EIR for the proposed project.

In sum, an EIR must address potential impacts of dewatering on domestic and public water supplies as a result of mining operations, and must also evaluate all the potential impacts of the proposed substantive, ongoing rate of dewatering that might be sustained over the duration of the project contemplated in the application.

B. Likelihood of hitting a fracture connected to a major fault conducting groundwater.

The likelihood of the proposed mining activities hitting a water-bearing fault, and potentially flooding mine tunnels and dewatering local wells, is high. This represents a potentially significant impact that must be assessed in an EIR.

It is clear from the report that was commissioned in 1996 to study the dewatering event and the hydrology of the site, that fractured bedrock systems are highly complex (*Hydrologic Study of Ground-Water Impacts from Mine Dewatering at the San Juan Ridge Mine, June, 1996, Luhdorff and Scalmanini Consulting Engineers, Woodland, CA,*

at 11, 18, 45). This report noted that there was insufficient data to adequately predict where water-bearing fractures are located (at 45). This inability to locate fractures and faulting by the previous mining operation led to the dewatering event that dewatered 11 wells from 1994 to 1996 and that impacted at least 4 others (at 47). Without knowing the exact location and nature of the fracture systems, and given the likely presence of far more fractures and faults than those in the vicinity of the previous excavation, it is unlikely that mining activities will be able to avoid these impacts in the future.

In addition, the extensive horizontal drilling program proposed by the current applicant to mitigate this risk must be evaluated for additional risks and environmental impacts. The current application has not provided information as to whether a horizontal drilling system has been tested and shown to be successful in locating water-bearing fracture and faulting zones. No scientific citations were provided in the application to provide evidence that these techniques are in use or are reliable, nor whether they might pose additional risks or unacceptable impacts.

C. Impacts to in-stream water quality due to effluent pumped into Spring Creek and Shady Creek

There is a potential for significant environmental impacts from discharge of water into the Spring and Shady Creek watersheds.

The 1993 EIR for the Siskon Gold Mine based its estimates for water discharges on a report by Golder Associates Inc. produced in 1992 for Siskon Gold Corporation. This report concluded that in its second year of underground excavations, the Siskon mine would be encountering 185 gallons per minute of water, peaking in the 6th year at 1,200 gallons per minute. (Table 2-4, Golder Associates, 1992). With actual underground data available after the mine had been in operation for nearly two years, the Luhdorff and Scalmanini report found that in its second year, the Siskon mine had an inflow of 750 gpm. This report also estimated that water inflow to the mine would peak at 1,765 to 2,450 gpm in the mine's sixth year of excavations. This huge amount of water far exceeds the dewatering estimates on which the 1993 EIR was based. A new EIR must evaluate the effects of these greater water inflows to the mine, including effects on wells (including any new wells that have been drilled since 1993) and the effects of the mine discharging these inflows into Spring and Shady creeks.

The Luhdorff and Scalmanini report stated that the previous mining operation failed to be in compliance with its Water Discharge Requirements on several occasions. Violations included: violations of flow limitation; elevated pH levels and elevated levels of total suspended solids and total settleable matter; and exceeding of water quality standards within the holding ponds.

Several of these violations had direct impacts on Shady and Spring creeks. These impacts stem largely from the improper construction and use of holding ponds during the dewatering event. The failure of holding ponds led to direct impacts on Spring Creek, specifically. These creeks are known to harbor several species of special concern,

threatened species, or endangered species including the Foothill yellow-legged frog (*Rana boylii*). This species is considered a species of special concern by the California Department of Fish and Game, and a sensitive species by BLM and the US Forest Service, and may be a candidate for listing under the Endangered Species Act.

Impacts to Spring and Shady creeks include potentially significant impacts to aquatic and riparian associated species, as well as to aquatic habitat characteristics. These impacts have not been adequately evaluated to date. A report commissioned in 1996 assessed flow increases as a result of dewatering and impacts that increased discharge could have on rainbow trout populations in Spring Creek. (*Groundwater Discharge Report*, Jones and Stokes, 1996). However this study lacked any analysis of the impacts of flows on other sensitive species, for example, the Foothill yellow-legged frog, which is present in both Spring and Shady creeks. Also, the report lacked any analysis of the impacts of temperature modification caused by dewatering flows entering Spring and Shady creeks. Among those critical of the report was State Parks Superintendent Ray Patton, who wrote in a letter to Nevada County:

> Department resource staff feel the Jones and Stokes report's scope is very limited in terms of the study time and the lack of pertinent natural resource information on Spring Creek. (source: The Sacramento Bee, Oct. 24, 1996)

Because of these critical omissions, suggested maximum flow recommendations in the report of 4 million gallons per day for Spring Creek and 5 million gallons per day for Shady Creek would likely have unknown and perhaps significant impacts on the stream flora and fauna of these creeks. The impacts could be especially damaging if these discharges were released during the late spring and summer months when amphibians depend on low and relatively warm flows that enable eggs and tadpoles to develop without disruption.

Although there are reports of discharges to Spring and Shady creeks during the dewatering event, it is clear that the reports have only estimated discharges and impacts of increased flows on these creeks, given that accurate data were not available due to the lack of installation of weirs or other measuring devices to accurately measure stream discharge. This oversight exemplifies the lack of information that we have on prior impacts to Spring and Shady creeks due to dewatering of the mine.

These issues must be addressed in a new EIR for mining at this location.

> **E. There is a likelihood of potential impacts to the environment and to human health and safety from instability of the underground workings and from surface subsidence, which must be evaluated in an EIR.**

During the Siskon operations from 1994 to 1997, mine operators discovered that the substrate through which they were excavating was less stable than geological studies had predicted. In the 1993 EIR, the lower gravels were characterized as cemented, based on

the summary of a report titled *San Juan Ridge Mine Project, Stability of Underground Workings* (1992). Page 5-3-5 of the 1993 EIR states:

> In addition, the report cited the lithologic characteristics of the lower fluvial gravel, stating that the natural cementation and clay content give the unit the consistency of cement. Tests on the lower gravel unit have also shown that the gravels have a swell factor of 30 percent or more, which indicates that a collapse of the lower unit would not occur.

However, one of the principal reasons the Siskon mine closed in 1997 was due to the instability of the lower gravel unit. According to an article published on May 2, 1997, in The Union newspaper (Grass Valley, Ca) mining was interrupted:

> …when an area of the floor in the San Juan's main tunnel became unstable. Much of San Juan's mining is done in ancient river gravel, and the weight of rock surrounding the tunnel, or drift, is squeezing the floor up like toothpaste, said Tod Herman, a Nevada County planner familiar with the mine.

On May 13, 1997, The Union ran another story about this problem:

> … Eighteen more employees were laid off Thursday at the mine near North Columbia…Mining has stopped while Callaway and Siskon board members decide how to work around an unstable area of the floor in the main tunnel.
>
> The floor became unstable in March when downward pressure from the surrounding rock walls squeezed the floor upward. Miners continued to extract ore as they abandoned the unstable area and worked backwards out of the mine. Work slowed as the viable area for mining was diminished, and 22 miners were laid off last month. … Eight workers now remain at the San Juan site to maintain the equipment. …
>
> The plan is to dig a tunnel around the abandoned area and concentrate mining in a body of ore in the western part of the mine, where the ground is more stable and less saturated than the one previously mined, [Callaway] said. Reaching the west ore body, however, will require another 5,000 feet of tunneling, he said.

(The Union Newspaper, May 13, 1997).

Based on these news stories and other reports from the Siskon mine, it is now known that there are stretches within the lower gravels where excavations will take place that may be unstable and pose significant risk of failure. Such areas pose significant risks to the safety of workers within the mine and raise questions about the viability of the mine plan.

Indeed the present application states: "The (lowest gravel) unit is *variably* hardened due to the presence of secondary calcite, pyrite and/or silican cement." (at 7, Application Appendix A, part 6) (italics added).

The degree of risk from such instabilities was not known at the time of preparation of the first EIR, and must be addressed in a new EIR.

The Mining Plan for the proposed project states on page 9 that the new method of mining will be a 'leap frog' technique where a solid block of in-situ material will remain between two excavations. Oversized material from the underground screening plant will be backfilled into the two excavated panels and *allowed to solidify*. After the backfilled material has congealed the block of in-situ material original [sic] left between them will then be extracted." (italics added).

The technique must be evaluated in a new EIR in the light of mining technology and experience. We are highly skeptical, for example, that the solidification/congealing process described by the applicant will occur in this rocky material, especially in light of the fact that it will not contain any particles smaller than ¼ inch in diameter, as described in the project's Operation Plan: "Approximately 60% of the mined gravel is forecast to be larger than ¼ inch in size; this will constitute the screen reject fraction to be used as backfill." (at 10).

The application goes on to state that all backfill material will be greater than 1/4" (at 11) and that all material smaller than 1/4" will be slurried and pumped to the surface, leaving the backfill material with no small aggregate material in it (at 12) . There is no mention or provision of backfilling and compacting material to native supportive density. How can this material "solidify" or "congeal" lacking fines? The implication is that the plastic movement of the mine itself will close in on this material. The operator implies the mine is stable yet also depends on the plastic movements in mine walls, ceilings and floors to compact backfilled material to sufficient compression to allow the removal of adjacent pillars supporting the mine. The potential for rapid movement and collapse with subsequent surface subsidence is implied as well.

In sum, it seems improbable that unconsolidated rock with no clay or other fine materials will "solidify" or "congeal" to a degree that it will not pose a safety hazard to miners who are relying on it to support the excavations in which they are working.

The Siskon project also encountered unanticipated instability in the material it drilled through when constructing its 1800-foot decline tunnel into the lower unit. The company used pressure-treated wood to reinforce the tunnel, introducing the risk of toxic compounds from the pressure treatment seeping into groundwater when the mine was flooded after closure. While it is our understanding that Siskon removed much of this wood in response to our objections to it, a new EIR must assess all the new information about instability and how its effects on mine operations might affect both worker safety and the environment.

F. Potential for significant impacts to vegetation and biological diversity

There are several sensitive plant and animal species that have the potential to occur within the area affected by the proposed mine. A full biological survey and assessment on the project location should be conducted by qualified personnel[1] during the environmental assessment process to identify sensitive species occurrences, evaluate risks to sensitive species and habitats, and to provide opportunities to mitigate these risks. This assessment should include ground surveys for sensitive species.

The prior EIR and supporting analysis was completed in 1993, nearly two decades ago. A new biological assessment must be undertaken to assess current conditions. This biological assessment should identify not only which species would be directly impacted by proposed mining operations, but also which species would be affected indirectly and cumulatively by proposed mining operations. A complete evaluation of threats to species occurrences should include: a) evaluating the impacts to hydrology for downstream aquatic species (e.g. Foothill yellow-legged frog, Western pond turtle); b) assessing impacts from the introduction of nonnative species (both plants and animals); c) assessing impacts to foraging habitat (e.g., known nearby habitat for the California spotted owl), as well as impacts of noise on foraging patterns (e.g.,. impacts to California spotted owl and northern goshawk), and d) impacts to the alteration of suitable habitat for sensitive species. The following is a discussion of some of the specific sensitive species and concerns.

1. Potential direct impacts to biological diversity

Though impacts to all species are of concern, there are several very rare species known to occur on or in the vicinity of the property of the proposed mine for which impacts could have a significant impact on population viability and species viability in the project area or beyond.

First, there is local knowledge that one of the three known California occurrences (California Natural Diversity Database [CNDDB], 2012) of inundated bog-club moss likely occurs within the proposed mine activity area. The potential for significant impacts to this species, including potential impacts to the viability of the species, is very high if this occurrence is extirpated.

In addition, there are known occurrences in the vicinity of the proposed mine activities of brownish beaked-rush, of which there are only 19 occurrences known in California (CNDDB 2012).

Further, there is the potential for occupied suitable habitat for Butte County fritillary, which though known from many occurrences throughout northern California (approximately 200), is known to occur in two disjunct distributional ranges. A genetic study is presently underway (J. Nelson, personal communication 2012) which examines

[1] Please refer to the DFG 2001 guidelines- attached.

whether this taxon warrants division into separate taxa, which would increase the potential rarity of each species.

Finally, there is the potential for other rare species to occur in the proposed activity area. The presence and distribution of these species should be identified with ground reconnaissance biological surveys. These rare species include Brandegee's clarkia, elongate copper moss, Foothill yellow-legged frog, Western pond turtle, and the California spotted owl.

2. Potential indirect impacts to biological diversity

The proposed mine activity area may contain suitable habitat for foraging for both California spotted owl and northern goshawk. There is local knowledge of California spotted owl occurrence in a nearby drainage off Jackass Flats Road. The California spotted owl uses openings for foraging and may be adversely impacted by several aspects of proposed activities associated with mine operations including noise and destruction of habitat for prey species. These impacts are also a concern for the northern goshawk, which is known to occur less than 3 miles from the proposed activity site.

There are also potentially significant impacts to known and potentially occupied suitable habitat for the Foothill yellow-legged frog that may be caused by impacts to hydrology and sedimentation affecting habitat for these species. Water released could dislodge egg masses, while sedimentation could obscure the substrate features of the stream required for egg laying. In addition, there may be significant impacts due to changes in hydrology to the Western pond turtle basking sites.

3. Potential cumulative impacts to biological diversity

The proposed mine activity site is located in an area that is a matrix of private and public landownership with ongoing activities (e.g. logging, vegetation management treatments, development). An assessment of the potential cumulative impacts to all sensitive species should be evaluated.

4. Potential impact of the introduction and spread of invasive species[2]

Proposed mining activities are likely to result in the introduction of invasive plant and animal species, and are likely to increase the abundance and distribution of existing occurrences of invasive plant species. Invasive species often cause adverse impacts to biodiversity and ecological processes. These species are not restricted by political boundaries, and there is thus the potential for spread and impacts to adjacent lands. The local community has worked extensively to control several invasive species, utilizing hand treatment and education to control and eradicate invasive species including, Scotch broom (*Cytisus scoparius)* and star thistle (*Centaurea solstitialis*).

[2] California Invasive Plant Council has identified Best Management Practices available at http://www.cal-ipc.org/ip/prevention

A new EIR must consider the potential for increased risk of the introduction of invasive species due to presence of seeds on machinery and vehicles, extensive soil disturbance from road building, and construction of settlement and infiltration ponds, and should identify potential mitigation measures. The biological assessment should also identify in ground surveys the known invasive species and the risk for their expansion, identifying potential mitigation measures. Following the extensive timber harvest conducted on 700 acres of the property in 1997, for example, Scotch broom appeared on many areas of the property where it had not previously been detected. All re-vegetation should be conducted, preferably with native species, but at a minimum with species identified as not posing a threat for the risk of invasion.

5. Potential impacts to sensitive vegetation

Proposed mining activities may result in direct impacts to riparian vegetation. In addition, there is the potential for the proposed mining to cause impacts to hydrology that will indirectly impact wetland habitat on adjacent federal lands where unique species are known to occur[3]. These impacts may be significant, and must be evaluated in an EIR.

G. Impacts to air quality from dust and diesel fumes.

The mine would be likely to result in significant increases in both diesel fumes and dust.

The operation plan calls for 500,000 gallons of diesel fuel to be burned each year. This represents a tremendous increase in local levels of particulate matter contained in diesel exhaust. The impacts of diesel exhaust on people and adjacent forest parcels must be considered. There is no description of the quality of mine equipment diesel motors or whether they comply with the California Air Resources Board new Tier III diesel emission requirements. These standards did not exist when the previous EIR was prepared and must be addressed anew.

In addition to impacts of the use of diesel fuel, there is the potential for significant increases in particulate matter due to dust. Perhaps the greatest potential impact is the surface deposition of 724,584 to 934,948 loose cubic yards (LCY) of sub 1/4" material deposited on the surface. We have calculated this amount based on the applicant's estimate that a total of 1,869,896 bank cubic yards will be mined (at 9, Appendix A of the application). When mined, bank cubic yards expand by 125% to "loose cubic yards." The applicant states that approximately 30 to 40% of mined material will be slurried to the surface.)

The majority of this material will be discharged as a slurry, and much of it will be deposited into an estimated 12 settling ponds. When the ponds go dry at some point, as the works progress, the finest sediment material will be deposited on the surface crusts and will be subject to wind erosion and the creation of dust clouds and fine particulate hazards. This material contains trace elements and extremely fine particulates that have

[3] A unique "Bog" community assemblage normally known from much higher elevations is known on adjacent BLM lands and is a valuable aesthetic and biological community asset.

the ability to affect lung and plant tissues. These impacts are particularly unique to this project and must be considered in an EIR.

H. The proposed mine would have potentially significant noise impacts on local residents

Relative to background noise levels, the proposed mining activities will likely have a significant effect on local residents, as well as on institutions including the North Columbia Schoolhouse Cultural Center, Grizzly Hill School and the Ananda College of Living Wisdom. These impacts must be assessed in an EIR.

The current mining proposal cites a noise study conducted by Brown-Buntin Associates, Inc., which was prepared for the 1993 EIR for the Siskon Mine project. The Brown-Buntin report based many of its conclusions on a study of ambient noise level measurements conducted by Wilson, Ihrig & Associates in 1988 and 1989.

Clearly, no environmental assessment of such a variable factor as noise can be based on reports that are now 19 and 24 years old. The area surrounding the proposed project is rural in nature and, in the absence of any other mining or industrial activities, enjoys exquisitely low ambient noise levels. These levels may even be lower now than they were during the Siskon mining project due to the fact that much of the area surrounding the mining site is "off the grid." At this point in time, many residents who formerly relied on noise-producing generators for power now have noiseless photovoltaic power for their energy source.

Key aspects of the Brown-Buntin report and the Noise section of the EIR were strongly disputed by SJRTA during the 1993 EIR hearings. Although the EIR was certified, the arguments of the SJRTA are still valid and must be addressed in any new noise assessments. These include:

a. Brown-Buntin's maps of "sensitive receptors," (that is, residences within earshot of the project) are missing dozens of residences. The maps submitted by Tim Callaway for his new project proposal are the same flawed maps submitted for the Siskon project. For example, neither of the two residences on "Upper Wepa Road" and none of the half-dozen residences on Sumi Road was included on the 1992 maps or on the current maps.
b. Intrusiveness of noise is not related just to its loudness, but to tone, frequency spectrum and other characteristics. Yet the Brown-Buntin report did not take these factors into consideration. Rather, it only evaluated the anticipated increases in dBA from the Siskon mining operation to the dBA levels of the Nevada County Noise Element standards. Thus, the 1993 EIR concluded that, although mining operations would quite possibly be increasing ambient noise levels by up to 5 decibels at many residences, this increase was not significant, because the increased levels still fell within the 50-decibel daytime limit set by the County

Noise Element. A new analysis of noise impacts from the proposed project must take into account the true impacts of project noise.

c. In the Noise section of the 1993 draft EIR, the authors stated, "In this analysis, a 5 dBA project-related noise increase is considered substantial and may constitute a significant noise impact." However, this crucial statement was deleted in the final EIR. In an area with very low ambient noise, a 5-dBA increase DOES constitute a significant impact, especially when that increased noise deviates from other ambient sources in tone, frequency, duration and other characteristics. A new EIR must re-evaluate the impacts of the noise that the proposed project will inflict on its neighbors.

d. The Nevada County Noise Element is itself a flawed document in that it lacks tools needed to provide adequate assessment and mitigation for noise in a predominantly rural setting. While Brown-Buntin states that the element was "developed at local level through substantial public input, taking into account the lower ambient noise levels of a rural county," this statement is not correct. Nevada County residents worked very hard to have the allowable noise levels in rural areas set at lower levels than in residential areas. Nevertheless, the county set the daytime levels at 55 dBA and evening levels at 50 dBA for rural and residential areas alike. Only nighttime standards deviate, with 45 dBA for residential and 40 dBA for rural. While these levels may represent thresholds that are not to be exceeded, they do not represent assessment of what level of noise in a rural environment would be perceived as significant. Any new EIR must recognize the very significant and widespread impacts on people and wildlife of the large increases in ambient noise that the proposed project will generate.

I. Transportation impacts

There are several transportation impacts of the proposed project. The number of new employees estimated by the San Juan Mining Corporation is between 78 and 92. This represents a potential total of some 66 employees making two one-way trips to the mine every day (assuming that only 71% of the 92 employees will be working during any 24-hour period). In addition, the mine proposal involves transportation of significant quantities of dynamite and diesel fuel, which represent threats to transportation safety. Furthermore, there is additional traffic in the project area due to increased population since the last EIR was prepared. These cumulative transportation impacts have the potential to be significant, and must be addressed in an EIR.

J. Potential for significant erosion effects must be evaluated in an EIR.

There is the potential for significant impacts due to erosion resulting from the proposed mining activities. The project proposes pumping approximately 2.5 million gallons per day during the dewatering phase, water that will surely cause some erosion. Whether this impact can be mitigated is a secondary issue; it is unreasonable to state that no erosion will occur.

In addition, trucks and cars associated with the mine will drive on dirt and gravel roads, which is very likely to create conditions under which erosion will be increased. Since

the previous project terminated in 1997, there is clear of evidence of erosion from roads throughout the project area (washouts and gully and rill erosion.)

In addition, the property has been heavily logged, and may be logged again—an impact that is likely to increase erosion, and creates a need for assessment of the cumulative impacts of the proposed project on erosion. Further, the application and associated plans do not adequately assess impacts of sediment and runoff associated with the large amount of material to be removed from the mine and allowed to remain at the surface.
Each of these impacts could result in significant erosion impacts, and could result in significant non-point source and point source discharges. These possible impacts must be fully disclosed and evaluated in an EIR.

K. Potential negative economic impacts must be evaluated in an EIR.

The application provided by the San Juan Mining Corporation addresses possible positive economic impacts of the proposed mining, including the creation of new jobs. However, there is no attempt to quantify potential negative impacts to property owners and the community from pre-mine quality of life standards to post-mine standards due to negative environmental impacts. Potential impacts include:

a. Economic costs of pumping water from greater depths and treatment of water resulting from effects of dewatering and replacement wells due to past operations and possible future events.
b. Impacts to property values due to the presence of the mine. This is a very real, very large risk to hundreds of nearby property owners. There is already great anxiety within the community about reductions in property values. A demographic study of the communities surrounding the project will likely reveal an aging population, people who have a high rate of selling and moving, in order to be in a smaller, more convenient home, or to be closer to children. Any further decrease in property values over that which has occurred during the current economic downturn has potential for great harm. Hedonic modeling and regression analysis should be applied to determine potential loss in property value and loss of quality of life from mine impacts on well water, air quality and noise levels and community cohesion and politics.
c. Impacts to potential county revenue loss due to reductions in property value.
d. Additional burden on community services such as fire, law enforcement, and medical providers.
e. Impacts to property values due to potential significant impacts, such as dewatering of domestic drinking water supplies and noise impacts.
f. Impacts of the mine, including traffic impacts, noise impacts, as well as impacts to water quality, on local businesses, including home businesses.
g. In the event of catastrophic well failure, the legal costs to the county from lawsuits should be considered.

L. The potential for significant impacts must be evaluated in light of cumulative impacts.

The environmental assessment for the current project provides no assessment of cumulative impacts of the proposed mine in concert with the numerous other environmental impacts that have taken place in the 19 years since the original EIR was prepared, or that are proposed in the reasonable foreseeable future.

For example, in 1996 while the previous project was in financial jeopardy, the mine owners sold all the merchantable timber on the property. The ensuing logging project in 1997 disturbed 700 acres of the property, much of it on fragile soils recovering from hydraulic mining operations of the previous century.

In addition, over the past year, and perhaps even currently, there has been an extensive dredging operation along much of the length of Shady Creek located on the project property. The party responsible for this operation has created roadways across and alongside the creek in disregard to regulatory standards, and dredging itself is currently not allowed in California. Further, logging has occurred on numerous other properties in the project vicinity. The cumulative impacts of the proposed project and these secondary operations must be evaluated.

II. The Use Permit Application and Environmental Assessment prepared by San Juan Mining Company failed to identify the potential for significant impacts, and are misleading to Nevada County and the public, and are inadequate under CEQA.

Of great concern is the fact that the application to re-open the San Juan Ridge Mine simply fails to identify numerous known potentially significant impacts of the mine. While we recognize that some impacts may be able to be mitigated, the applicant has an obligation under CEQA to disclose potentially significant impacts to the environment, and Nevada County has an obligation to require that public documents such as an Environmental Assessment or EIR present factually accurate information to the public.

"CEQA compels government first to identify the environmental effects of projects, and then to mitigate those adverse effects through the imposition of feasible mitigation measures of feasible alternatives… It permits government agencies to approve projects that have an environmentally deleterious effect, but also requires them to justify those choices in light of specific social or economic conditions (Sierra Club v. State Bd. of Forestry, supra, 7 Cal.4th at p. 1233, 32 Cal.Rptr.2d 19, 876 P.2d 505). The following is a list of some of the potentially significant impacts that were not identified in the EA provided to date.

A. The application fails to provide accurate information concerning existing conditions

The application's description of existing conditions is not adequate for the purposes of CEQA, nor does the information provide up-to-date estimates of the number of residences in the vicinity of the project. Question (A)(2) of the Use Permit Application Environmental Assessment explicitly requires the applicant to provide specific information concerning residences near the proposed project. The description provided fails to identify the number of residences and home businesses in the vicinity of the proposed project, and fails to identify residences affected by various impacts, including impacts of transportation requirements, dewatering, impacts to domestic water supply, disposing of effluent, and impacts to noise and air quality. Instead, the text response includes no information concerning numbers of residences affected, and the accompanying maps are outdated by 20 years and contain information that was not even accurate at the time the maps were originally prepared. It is essential that the applicant disclose impacts on residential uses in the vicinity of the proposed project.

B. The application reports that there will be no impacts to existing physical features, rather than identifying potentially significant risks of tunneling though faults, and risks of subsidence and caving in due to tunneling in highly unstable material.

The application's environmental assessment provides misleading information concerning the potential for significant impacts to physical features. The applicant answers "no" to Question (C)(1))(b) in the Environmental Impacts section of the assessment, which asks "Will the project result in the destruction, covering, or modification of any unique geological and/or physical features, such as unstable soils or historic faults?" In addition, the applicant provides a misleading answer to question (C)(1)(d), "Will the project expose the people or property to geologic hazards, such as earthquakes, landslides, mud slides, ground failures, or similar hazards?"

Despite these "no" answers, the description then reveals that the project 1) IS anticipated to intercept historic faults, and 2) that the project poses risks of subsidence and caving, that require special mitigation measures to insure that tunneling into unstable materials will not result in cave-ins and subsidence.

The very reason that the past operations of the mine caused dewatering of wells was because the operations disrupted a bedrock fault that allowed water to inundate the mine. Fault maps produced at that time reveal that the proposed project is also likely to intersect other known significant fault lines.

This issue is of critical importance in assessing potentially significant impacts, and it is of great concern that this application fails to note this serious issue.

In addition, as discussed above, the material through which tunnels will pass is now known to be unstable, at least in some areas, posing a significant risk of failure and,

possibly, subsidence. This risk must be addressed in a clear and obvious manner. The applicant cannot be allowed, under CEQA, to fail to disclose these significant risks, or to bury these possible risks in the body of text while stating outright that no impacts of this nature will occur.

C. The application incorrectly reports that no erosion will result from this project.

The applicant checked "no" to question (C)(1)(c) of the EA questionnaire, which asks, "Will the project result in increased erosion from wind or water, on-site or off-site?" However, the project proposes pumping about 2.5 million gallons per day during the mine rehabilitation phase and even more during the active mining phase. During the previous project, settling and infiltration ponds were at times overwhelmed by the sheer volume of water being pumped out of the mine, resulting in high volumes of water being discharged directly into Spring Creek. It is likely that these discharges caused erosion, and they may do so under the proposed project. Whether this impact can be mitigated is a secondary issue; it is unreasonable to state that no erosion will occur. In addition, trucks and cars associated with the mine will drive on dirt and gravel roads that will be, or already are, constructed. These roads are located in extremely fragile and erodible sands, gravels and fragile, new soils which will require the utilization exceptionally robust anti-erosion measures and constant maintenance to limit erosion. Since the previous project terminated in 1997, there has been considerable erosion from various abandoned project roads. In addition, the property has been heavily logged, and may be logged again—an impact that is likely to increase erosion, and creates a need for assessment of the cumulative impacts of the proposed project on erosion. Further, the application and associated plans do not adequately assess impacts of sediment and runoff associated with the large amount of material to be removed from the mine and allowed to remain at the surface.

Each of these impacts could result in significant erosion impacts, and could result in significant non-point source and point source discharges. These possible impacts must be fully disclosed and evaluated in an EIR.

D. The application incorrectly states that the project will not result in any stream alteration.

Again, the applicant has inadequately addressed this question. Potentially significant impacts include pumping into streams outside of periods of peak flows and impacts due to changes to water table and aquifer recharge. The text of the application and associated documents does reveal that pumping will affect Spring and Shady creeks; the amount of water that is anticipated to be pumped, plus any amounts that might be pumped in the event that other water-bearing faults are disrupted, could result in significant alteration of the streams should this impact occur in months where peak flows do not generally occur. Even naturally occurring peak flows in winter and spring months can result in alteration of streambeds, but if large amounts of extra water are discharged into streams during any

season, this alteration could have significant negative impacts to vegetation and wildlife associated with riparian and aquatic habitats. This impact must be disclosed in the environmental documents associated with this project.

E. The application falsely states that the project will not result in any increased runoff.

This statement is not accurate. Again, under CEQA, the applicant is required to address potential impacts of the proposed project, and then to name mitigation measures and evaluate their potential effectiveness. Obvious impacts include runoff associated with surface disturbance that is associated with the 6 miles of road reconstruction and use associated with the proposed action as well as point source pumping into stream watersheds.

F. The application falsely states that the project will not result in any potential chemical contamination.

While the applicant does not propose to use chemicals for extraction of gold, the project involves storage and use of a great deal of diesel fuel. In addition, during the Siskon project several nearby wells that were adversely impacted by mine dewatering were replaced with wells that contained unacceptable levels of iron and other substances such as nickel and manganese. The potential of impacts associated with such pollutants to domestic water supplies must be evaluated in an EIR, and disclosed by the applicant.

G. The application falsely states that the project will not result in any changes to quantity of ground water.

The applicant replies to question (C)(2)(f) in a misleading manner. This is concerning given the magnitude of unanticipated impacts that occurred during the previous project and the degree of concern that local residents have about potential impacts to their domestic water supply.

During the 1994-1997 project, numerous wells lost water as a direct result of mine operations. Eleven wells lost water entirely, and 4 suffered significant impacts. One of these wells was the well supplying water to the Grizzly Hill School, a public school currently serving 95 students. While replacement wells were drilled, many were significantly deeper than the ones they were replacing, requiring more expense for pumping; and some of these wells fail to meet California drinking water standards, so must be filtered and treated. Nearly three years after the school well was replaced (in Sept., 1995), in a June 18, 1998 article, The Union newspaper described results of the well's most recent tests. This article stated:

- Aluminum levels peaked at 5,600 micrograms per liter in September. They're now 1 percent of that: 56 micrograms/liter. Federal health standards require less than 1,000 micrograms/liter, and aesthetic standards are 200 micrograms/liter.

- Nickel levels peaked at 726 micrograms/liter in October; now they're at 32.1 micrograms/liter. Health standards require fewer than 100 micrograms.
- Iron levels are at 11,700 micrograms/liter, almost 40 times over the 300 microgram/liter federal taste standard.
- Manganese levels are at 2,300 micrograms/liter, 46 times the 50 microgram/liter federal taste standard.

While the former mine operator paid for water treatment for a period of time, the money has run out and Grizzly Hill School must currently pay for its required water treatment.

Dewatering occurred in 1995 and 1996 when mine excavations ruptured a water-bearing fault. The path of the underground workings of the proposed mine passes through several similar faults. Thus, a similar impact on an aquifer is distinctly possible. The resulting impacts could include dewatering of wells, changes in the aquifer, etc.

After the Siskon mine closed in 1997, the underground workings filled back up with water and the water level in some wells that had previously been impacted gradually rose higher. Clearly, these water levels might subside as a result of the initial dewatering during the "mine rehabilitation" phase of the proposed project.

In addition, throughout the 1,700-acre project property there are numerous perennial and seasonal streams, seeps and wetlands. The extraction of millions of gallons of water every day in the basin-like project property may very well deplete the sources of this surface water.

These are all impacts that are not highly speculative; they are impacts that are extremely likely, and that in many cases, have already occurred. The applicant must disclose these risks, and the risks must be assessed in a new EIR.

H. The application incorrectly states that the project will not result in any substantial reduction in the amount of water available for public water supplies.

The earlier project by Siskon Gold Corporation has already altered the amount of water available for local public water supplies that meet state drinking water standards. Specifically, Siskon's mining activities resulted in impacts to two public water supplies: the wells at North Columbia Schoolhouse Cultural Center and Grizzly Hill School. Currently, to meet water quality standards, Grizzly Hill School must treat the water from the replacement wells provided by Siskon. Grizzly Hill's original wells met drinking water standards without the need for treatment. Further impact could be catastrophic to the water supplies for these entities that serve the public. These are serious concerns that must be assessed in an EIR. Under CEQA, the applicant must not be permitted to avoid disclosing these impacts.

I. The application incorrectly states that the project will not result in any impacts to people or property from water-related hazards, when this is exactly what occurred in the last mine effort.

The previous mining project disrupted a water-bearing fracture that resulted in rapid and nearly catastrophic flooding in the mine's underground areas. This may occur again. Potential impacts of such an occurrence include the possible flooding of the mine and loss of human life, as well as short and long term impacts to water supplies discussed above.

J. Air and noise:

The application incorrectly states that the project will not result in any changes in air movement, temperature, dust, ash, smoke, fumes or odor as a result of the project. Impacts include dust due to moving of material, dust from 6 miles of dirt, sand and gravel roadways, emissions from increased traffic and impacts of diesel fumes.

K. The application fails to disclose potential impacts to vegetation and wildlife.

The application incorrectly states that the project will not result in any changes in species or number of plants and animals, and that there will be no reduction in any unique, rare, or endangered species of plants and animals including their habitat.

The applicant checked "no" to the questions related to changes in species or number of plants and animals. The applicant then states that a number of species that might be affected by the proposed project were identified in a CNDDB query, but that no surveys were undertaken nor was any biologist or botanist employed to assess risks.

Thus, it is not rational to check the "no" box in response to this question. The more factual answer would be that based on the CNDDB information, there is the potential for impacts to animals and plants, and that further surveys and analysis are needed to determine the extent of the impacts.

Based on information gathered by a SJRTA member with professional botanical and biological training, it appears that there are several species that may be affected by the project, and several rare species that may be subject to potentially significant impacts. These include impacts to amphibians in Spring and Shady creeks, particularly impacts of dewatering or water releases made during warm seasons; impacts to the many riparian-influenced species that may be located in the bogs, seeps, and springs located in the affected area; impacts of noise/dust to a known nearby pair of California spotted owls; impacts to the very rare inundated bog-club moss—the property in question is the likely location of one of three known instances of this species in California; and to other rare and unique species.

L. The application incorrectly states that the project will not result in any effects to existing land uses.

The project is very likely to have impacts on existing land uses; yet again, the applicant fails to identify these potential impacts.

First, there are several institutions and organizations that are located very near the proposed mine that would very likely be impacted from the proposed mine. The North Columbia Schoolhouse Cultural Center is a non-profit cultural center that provides a variety of cultural programming and events on a daily basis, including classes, concerts, poetry readings, theatrical productions, and community events. Impacts of noise, traffic, dust, fumes, and impacts to the water supply for this cultural center are all possible, and in some cases, very likely.

The Grizzly Hill School is also located adjacent to the proposed mine. Impacts of traffic on the school crossing zone, of dust, fumes and noise produced during school hours, and the cumulative impacts of existing damage to the school's water supply coupled with possible new impacts to the school's only water supply must be disclosed and addressed in an EIR.

A 4-year residential college, the Ananda College of Living Wisdom, founded in 2003, lies less than a mile from the project's property line. It describes itself as "the only college in the U.S. offering an off-the-grid year-round campus in wild nature."

In addition to these three physical institutions, numerous groups and individuals use the area surrounding the mine for a variety of cultural and recreational activities on private and public land adjacent to the proposed mine. The Yuba Watershed Institute, a 22-year-old organization based on the San Juan Ridge, has a cooperative management agreement with the Bureau of Land Management for management of 1,800 acres of BLM land surrounding the project site. The YWI and its members schedule numerous hikes, lectures, and activities on this land, several parcels of which are directly adjacent to the proposed mine. Further, local residents have harvested cranberries seasonally for over 30 years on the mine property prior to the present ownership of the property, as well as on wetlands on BLM land in close proximity to the proposed mine.

The impacts of dewatering, noise, dust, diesel fumes, traffic, and possible impacts to domestic water supplies all pose threats to these uses of adjacent lands. These impacts should not be glossed over, but must be assessed in the EIR. Indeed, this area is the center of many cultural and educational activities for this area, something that was not revealed by the applicant.

M. The applicant's environmental assessment fails to assess impacts on, and realities of, the current population in the vicinity of the proposed mine.

The application is simply misleading in the populations it identifies in the vicinity of the proposed project area, and possible impacts to such populations.

First, the applicant fails to identify historic North Columbia as the nearest community impacted by the project. This community includes a cultural center, school, several residences and a store, as well as the main Cal Fire station for this area. Ignoring this as a community has the effect of downplaying the significance of a mine located within this center of population and center for various services, such as public education.

Second, the application fails to accurately identify the extent of the population near the proposed mine. There are approximately 650 private landowners located within 3 miles of the proposed mine, which, depending on the nature and extent of various impacts, could be directly affected by the mine's traffic, dust, noise, effects on domestic water supplies, and effects of effluent from the mine. Identifying a handful of houses simply fails to accurately represent the nature of the community surrounding the mine.

Based on this lack of information, the applicant incorrectly claims that the project will not alter the location of human population in this area. In truth, if a significant number of wells are dewatered by the mine operations, or if the water supply for the school is irreparably damaged and the project applicant does not have funds to replace it (which is not an uncommon occurrence in the recent history of gold mining in the United States) it is likely that people would be forced to move away.

N. Project application fails to identify changes in transportation impacts based on population increase, including increase in home business use on both access roads to the project.

The project application presents a misleading and inaccurate assessment of potential impacts of traffic. Since the 1993 EIR was prepared, there has been a significant increase in the population of the area surrounding the mine. In addition, there is a significant increase in home businesses in the greater project area. This increase in population must be accurately disclosed and assessed in an EIR.

Also, the application does not clearly disclose the degree and location of traffic impacts due to mine operations. The traffic portion of the applicant's environmental assessment states that the project will generate 51 one-way trips per day. However, the assessment also states that the project will have 78-92 employees, (at 28). Based on this number of employees, how has the applicant calculated such a low number of vehicle trips? Finally, the potential risks from the transportation of significant amounts of explosives and flammable fuels on the narrow and winding roads leading to the project site must be fully disclosed and evaluated in an EIR.

III. The potentially significant impacts were not addressed or not adequately addressed in the original EIR, and thus a new EIR must be prepared.

The applicant has argued that a new EIR should not be required, as the proposed mining project is the same as the previous project, and impacts of the project have been assessed in the former EIR (see San Juan Mining Corporation Application, page 1).

Whether an EIR for an earlier project is sufficient for a new project or a later version of the same project is also addressed by CEQA. CEQA provides:

> When an [EIR] has been prepared for a project pursuant to this division, no subsequent or supplemental [EIR] shall be required by the lead agency or by any responsible agency, unless one or more of the following events occurs:
>
> (a) Substantial changes are proposed in the project, which will require major revisions of the [EIR].
>
> (b) Substantial changes occur with respect to the circumstances under which the project is being undertaken which will require major revisions in the [EIR].
>
> (c) New information, which was not known and could not have been known at the time the [EIR] was certified as complete, becomes available. (CEQA Section 21166).

See also *Save Our Neighborhood v. Lishman* (2006) 140 Cal. App.4th 1288, finding that two development proposals for the same piece of property, despite being similar to each other, were not the same CEQA project.

Each of the three circumstances specified above is present for the proposed re-opening of the San Juan Ridge Mine. First, substantial changes in the mining plan are necessary due to the fact that the prior project did not anticipate significant flooding, or impacts to domestic water supplies that resulted from pumping that was designed to remove the water from the mining tunnels. These changes in the proposed mining plan ideally reduce the likelihood of the impact of the project on water supplies, but result in a large amount of increased drilling. The potential effectiveness of these proposed changes to the mining plan must also be evaluated through the EIR process: is the proposed plan a "tried and true" method of preventing hydrological disasters, or is it a novel, untested approach to the problem?

Second, substantial changes have occurred with respect to the circumstances under which the project is being undertaken. Numerous events that have the ability to result in cumulative impacts to the affected environment have transpired since the EIR was completed for the original project:

- Much of the mine property has been subjected to intensive timber harvest, as have adjacent properties; other mining has occurred nearby;
- The 1994 mining project itself caused changes to the underground water regime, affecting domestic water supply, including the water supply for the public school that is located adjacent to the property;
- Pumping that occurred in order to remove unanticipated water that flooded the mine during the last project had impacts on the Spring and Shady creek drainages and associated wildlife and vegetation;
- Drought and climate change have had impacts on domestic water supply;
- Pollutants located in replacement wells drilled by the old mining company have rendered some replaced water supplies unhealthy and/or unpalatable.

In addition to physical changes in circumstances, there are enormous legal changes:

- A new General Plan has been adopted by Nevada County;
- Changes to CEQA require analysis of climate change and other issues that the old EIR failed to address;
- Some species that may be affected by this project have become rare, threatened, or endangered and listed as such since the previous EIR process began;
- The population of the residential area surrounding the proposed re-opening of the mine has grown substantially, which means that there are new traffic impacts and new impacts on residential neighborhoods.

Finally, new information has emerged that provides more information concerning possible risks of this project. The incursion into a water-bearing bedrock fault that resulted in flooding of the mine during the 1993-1997 project and dewatering of wells had not occurred when the previous EIR was being prepared, nor had impacts to water quality resulting from remediation of the affected wells. This presents a great deal of new information that requires analysis. There is new scientific information concerning impacts to aquifers and the importance of aquifers and ground water in drought years and with possible global climate change. There is a host of new information concerning wildlife species impacted by the proposed project, including a great deal of new information on populations of Foothill yellow-legged frogs and California spotted owls, as well as information concerning rare plant species. There is also a great deal of new information in the area of invasive species and the impacts of invasive species populations on native vegetation.

Because the current proposal involves substantial changes from the original proposal; because substantial changes in the circumstances in which the project will occur have taken place since the initial EIR was prepared; and because new information has come to light which was not available when the initial EIR was proposed; the applicant is required by CEQA to prepare a new EIR.

A. Substantial changes are proposed in the project, requiring preparation of a new EIR.

1. Proposed changes in mining techniques are proposed to avoid collapse of the underground workings.

The past project was stopped in part due to unstable material and the resulting uplifting of the mine floor that occurred in 1997. Now the applicant proposes to change the geometry of the excavations and the technique used to mine these tunnels. While these new techniques may reduce risk, their capacity to reduce risk and the risks they seek to mitigate have not been addressed in any environmental document.

If these risks were significant enough to shut down the previous mining operation, potential changes needed to avoid these impacts are clearly "substantial" in nature. Without such changes in the mining operations plan the new project may not be feasible. Changes in procedures that then make mining possible must be considered, by definition, to be substantial.

2. Proposed changes in mining techniques to avoid impacts to faults and aquifers, impacts that included flooding of the mining operation tunnels, and dewatering of local domestic water wells, represent substantial changes requiring preparation of a new EIR.

The past mining operation failed to anticipate and avoid impacts to faults and fractures. When a water-bearing fracture was disrupted by the previous mining operation, there was massive flooding of the mine as well as dewatering of domestic water wells. In an attempt to avoid these impacts in proposed mining activities, the applicant proposes an extensive horizontal drilling operation that will continually be boring exploratory holes 300 feet in advance of the underground workings in an attempt to discover water-bearing faults and fractures before they might be disrupted by the larger mining operation.

Again, no evidence is presented in the application documents that demonstrates the feasibility of this approach. A new EIR must be prepared that will evaluate the applicant's claim that such a drilling program will protect wells in the area.
The magnitude of the impacts discovered during the previous mining operation was much greater than anticipated in the 1993 EIR. The Siskon mine was evacuated due to flooding, and wells lost water. The school water supply has since only been able to meet California drinking water standards through the use of continuous and expensive treatment and filtration.

Proposed changes to the mining techniques and plans are substantial by definition, as they propose to alleviate an exceptionally significant negative consequence of past techniques. Again, the proposed techniques may result in reduced risk of impacts to local hydrology—but an environmental review process has not evaluated that. The proposed horizontal drilling program has the potential for impacts not evaluated in the 1993 EIR, and thus represents a substantial change in the project requiring preparation of a new EIR.

B. Substantial changes have occurred with respect to the circumstances under which the project is being undertaken.

1. Unanticipated impacts to domestic water supply have proved to be significant, as has the potential for mine flooding to impact worker safety and human health.

These impacts have proven to be significant. Mitigation measures proposed in the initial EIR did not contemplate dewatering or permanent toxicity to wells that provide public and domestic water supplies.

In addition, potential catastrophic flooding of the mine was not evaluated as a significant risk. In fact, the 1993 EIR based its surface and groundwater hydrology section on a hydrological model that concluded there was no connection between the gravels where mining would take place and surrounding bedrock.

The EIR summarized the model as follows:

> The results of the model analysis indicated that three out of twenty wells located within 3,000 feet of the proposed project site would be minimally impacted. Maximum water level drops of 0.2 to 0.8 feet were predicted in these wells over 7 years of mining. [Westec FEIR, p 5-3-7. 1993]

In fact, 11 wells lost water entirely, and 4 other wells experienced drops well above that level. Now that it is known that this model was catastrophically wrong, a new EIR must be prepared incorporating current knowledge of groundwater conditions.

Finally, the current lack of potable water for Grizzly Hill School due to earlier mining activities represents a significant change in circumstances requiring preparation of a new EIR.

2. **Instability of soils and the gravels within the mine was not anticipated, nor was the potential for impacts to human health, the environment, and the viability of the proposed mine.**

As discussed elsewhere in this section, the instability of the cemented gravels that will be mined is a significant issue that represents a change in circumstances of carrying out the proposed mine.

3. **Increase in population within 3 miles of the proposed mine represents a change in circumstances requiring preparation of a new EIR.**

As discussed elsewhere in this document, the population in the area affected by the mine has increased dramatically. Some new residents and new residences dependent on water wells for domestic water supply are in areas likely to be directly affected by dewatering. This is a new circumstance that requires evaluation in a new EIR.

4. **New laws and regulation represent a change in circumstances that require preparation of a new EIR.**

Since the preparation of the original EIR in 1993, there have been substantial changes in laws and regulations affecting the proposed project. This represents a change in circumstances.

A new Nevada County General Plan was adopted in 1996, and was updated in 2008 and 2010. Because the EIR was adopted three years prior, it is not clear whether the proposal is consistent with the present General Plan.

There have been a number of changes in California law since the preparation of the original EIR, including passage of The California Global Warming Solutions Act of 2006 and subsequent CEQA regulations requiring environmental documents to assess impacts of greenhouse gases and climate change. In addition, there has been a great deal of research on the need to assess proposed projects in light of climate change, particularly in addressing changes to water supplies.

Finally, identification and listing of species and habitat located in the project area as sensitive, rare, and endangered represents a change in circumstances. For example, the Spring run Chinook salmon was listed as threatened under the Endangered Species Act, and a recent Biological Opinion (National Marine Fisheries Service's Biological Opinion (February 29, 2012)) requires removing obstacles to fish passage by 2020, including manually hauling salmon to the portion of the Yuba above Englebright Dam by 2014. This change in listing, and resulting opinions, may result in this rare species of salmon being present in the portion of the South Yuba River affected by the proposed project. Such changes represent a change in circumstances in light of which the impacts of this project must be addressed. Other species have received new designations under the ESA, or are considered more sensitive than they were in 1993, as information concerning these species has grown and as the species have become more rare. Such species include the California spotted owl and the Foothill yellow-legged frog.

These changes in law and policy require represent a change in circumstances that require preparation of a new EIR.

5. **Climate change represents a change in circumstances that should be addressed in a new EIR.**

Climate change is a change in circumstances that can have profound effects on the availability of water resources, as well as on the relative impacts of a water-intensive project, like the proposed mine. Changes in our climate over the past 20 years may affect how aquifers respond to dewatering, may result in differences in cumulative effects of water removal on the environment.

6. **Logging, mining, and other activities on the property where the proposed mining would be located and on adjacent lands represent a change in circumstances.**

A number of impacts to the physical environment on and near the subject property have occurred since the old EIR was prepared in 1993. Impacts include: intensive logging on the subject property in 1997 as well as on other adjacent properties; previous extensive dredging on nearby properties; possible present dredging on the subject property; and other impacts of mining activities. These activities have resulted in changes to the

physical environment that represent changed circumstances that require preparation of a new EIR.

C. New information not available at the time of the preparation of the original EIR requires preparation of a new EIR.

1. New information concerning impacts of mining activities on domestic water wells has come to light.

In 1995, Siskon Gold's mining operations disrupted a water-bearing fault that flooded the Siskon mine and resulted in known dewatering of 10 wells, as well as partial dewatering of 4 other wells. Wells dewatered included the domestic water well for the Grizzly Hill School. The replacement well provided by Siskon does not meet California standards for drinking water, and the school must treat the water at taxpayer expense to provide safe drinking water to students and staff. The impacts to 15 wells that occurred as a result of the 1994-1997 mining operation represents new information that must be incorporated into a new EIR.

2. New information concerning the instability of material through which the mine is excavated must be evaluated in a new EIR.

The former EIR was based on the assumption that the material that would be mined would be "cemented gravels" that were stable in nature. In 1997, the mine's operator and Nevada County planner Tod Herman mentioned in interviews with The Union newspaper that unstable ground had been encountered in one of the branches of the Siskon mine. The uplift of that tunnel floor was named as one of the reasons for the ultimate closure of the mine.

The current EIR identifies the material that will be mined as "variably stable." The new information discovered regarding the instability of the material in the underground workings is critical to understanding potential impacts of the mine. This is information that was not discovered until well into the excavation process, and thus was not evaluated and could not have been evaluated in the previous EIR.

3. New information concerning impacts on water supply and aquifer recharge as well as impacts of dewatering in times of drought and global climate change must be evaluated in a new EIR.

There is a great deal of new information on the potential impacts of climate change on water availability and the relative intensity of impacts to water supply. For example, the Intergovernmental Panel on Climate Change (IPCC) projects with "high confidence" that water supplies stored in mountain snowpacks such as the Sierra Nevada will decline around the world, reducing water availability in regions supplied by meltwater (*Summary for Policy Makers in* Climate Change 2007: Impacts, Adaptation and Vulnerability, Contributions of Working Group II to the Fourth Assessment Report of the

Intergovernmental Panel on Climate Change (M.L. Perry et al., eds., Cambridge Univ. Press 2007). The IPCC specifically identified the American West as vulnerable, warning: "[p]rojected warming in the western mountains by the mid-21st century is very likely to cause large decreases in snowpack, earlier snow melt, more winter rain events."

These changes have a significant impact on the reduction of available water supply, and may affect rates of aquifer recharge. Such information must be used in assessing the impacts of such a large amount of water removal on water supplies.

For the reasons laid out in full above, we hereby request that Nevada County require the preparation of a full, new EIR for the proposed San Juan Ridge Mine, including full circulation of all EIR sections and a full public process. A supplemental EIR or recirculation of the previous EIR would not be appropriate or acceptable given the issues and impacts we have provided in detail within these comments.

Thank you for consideration of our comments.

Sincerely,

Gary Parsons

President
San Juan Ridge Taxpayers Association

Cc:

California Water Quality Control Board, Central Valley Region
California Department of Fish and Game
Bureau of Land Management, Motherlode District
Department of Water Resources