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Re: Sargent Ranch Quarry, Environmental Impact Report, SCH # 2016072058

Dear Mr. Salisbury:

On behalf of San Francisco Bay Physicians for Social Responsibility (SF Bay PSR), we are writing to submit comments on the Draft Environmental Impact Report (DEIR) for the proposed Sargent Ranch Quarry Project.

SF Bay PSR is a public health education and advocacy non-profit organization that works to protect human life from the gravest threats to health and survival. We represent a network of hundreds of physicians and health professionals in the greater San Francisco Bay Area, including in Santa Clara County. We promote public policies that protect human health from the threats of nuclear war and other weapons of mass destruction, global environmental degradation, climate change, the epidemic of gun violence, and other social injustices in our society today.

We are writing to strongly urge the County to reject the conditional use permit for Sargent Ranch Quarry. As detailed below, our organization has numerous concerns regarding the proposed Sargent Ranch Quarry Project and its threat to cultural resources, air quality, open space, and water resources.

The proposed Project's irreversible impacts to the heart of the ancestral lands of the Amah Mutsun Tribal Band are unacceptable. We urge the Department to prioritize the sovereignty of the Amah Mutsun Tribal Band and the integrity of their cultural resources in your consideration of this project.

As health professionals, **we are deeply concerned by the Project’s potential to negatively impact health.** Exposure to the Project’s estimated particulate matter and NOx pollution will contribute to a wide range of potential adverse health harms, including increased risk of mortality from cardiovascular disease, asthma attacks, and preterm birth. Children, older adults, and individuals with heart or lung disease are especially vulnerable to these impacts.¹

Overall, the adverse public health and cultural impacts of this Project lead us to **strongly urge the County to reject the conditional use permit for Sargent Ranch Quarry.** As all alternative projects identified in the DEIR inadequately address the negative impacts of the Project we support the “No Project Alternative”.

Detailed Comments:

The Sargent Ranch Quarry project would have irreversible and adverse impacts on the health and well-being of Santa Clara County residents, community members living within the broader San Francisco Bay Area Air Basin, and most profoundly, members of the Amah Mutsun Tribal Band.

We provide detailed comments expounding upon our reasons for opposing this project in reference to the following sections of the DEIR:

- I. Cultural and Tribal Cultural Resources**
- II. Air Quality and Health**
- III. Aesthetics**

- I. Cultural and Tribal Cultural Resources**

The desecration of sacred sites has profound and adverse health impacts.

In Impact 3.5-5, the DEIR states that the Project would “cause a substantial adverse change in the significance of the Juristac Tribal Cultural Landscape.” These adverse changes are not remediable: “Reclamation activities would not restore the JTCL to a condition that reflects its cultural significance.” (3.5-41, p. 375). This impact statement effectively outlines the truly devastating potential impacts of this Project. However, the DEIR’s assessment of cultural resources fails to account for the health impacts associated with industrial resource extraction on sacred and culturally important lands. It is imperative for the Department to also consider and explicitly document the mental, physical, and spiritual health effects of the destruction of what is considered the “heart of the ancestral lands” of the Amah Mustun Tribal Band.²

¹ US EPA. (2016, April 26). *Health and Environmental Effects of Particulate Matter (PM)* [Overviews and Factsheets]. <https://www.epa.gov/pm-pollution/health-and-environmental-effects-particulate-matter-pm>

² About Protect Juristac: Sacred Grounds of the Amah Mutsun. *Protect Juristac*. <https://www.protectjuristac.org/about/>

Colonization has profoundly and adversely impacted the health of Indigenous communities in myriad ways.³ Research has documented the deep connection between Indigenous health, well being, and sacred sites.⁴ Subica et. al. provide further explanation of how cultural trauma perpetuates health disparities, for further reference of the interconnectedness of culture, structural violence, and health outcomes.⁵

We urge the Department to seriously consider the extensive, irreversible impacts the Project will have on this sacred site, and the associated direct impacts to the spiritual, physical, and mental health of members of the Amah Mutsun Tribal Band. We also urge the Department to consider the Native American Freedom of Religion Act, the United Nations Declaration on the Rights of Indigenous Peoples in your evaluation of this project's legality and compliance with federal and international agreements.

II. Air Quality and Health

The DEIR details the significant and unavoidable effect this project would have on air quality in the San Francisco Bay Area Air Basin (SFBAAB). Significant and unavoidable is defined by the DEIR as an impact that “would result in an adverse effect that meets or exceeds the applicable significance threshold but, even with the implementation of mitigation measures to lessen the impact, if available, the residual effect would not be reduced to less-than-significant levels.” (3.1-3, p. 129)

We are especially concerned with the wide-ranging impacts on air quality that the DEIR estimates, not just for local populations, but for an entire region in which millions of Californians live and breathe. As illustrated on page 188 of the DEIR: “The primary sources of pollutants are on-site operation of off-road (mining) equipment and on-road vehicle traffic. Off-road equipment and most on-road vehicle traffic emissions would affect air quality in the SFBAAB”. Table 3.3-6 details the polluting emissions that would be generated by the project. This table illustrates that “NO_x, PM₁₀, and PM_{2.5} emissions would exceed BAAQMD [Bay Area Quality Management District] significance thresholds for emissions within the SFBAAB resulting in a significant impact”. (3.3-24, p. 192).

We agree with the baseline assessment of the DEIR which states that the Project will have significant adverse impacts on the health of communities in the SFBAAB by:

³ Gracey, M., & King, M. (2009). Indigenous health part 1: Determinants and disease patterns. *The Lancet*, 374(9683), 65–75. [https://doi.org/10.1016/S0140-6736\(09\)60914-4](https://doi.org/10.1016/S0140-6736(09)60914-4)

⁴ Cooper, D., Delormier, T., & Taualii, M. (2019). “It’s Always a Part of You”: *The Connection Between Sacred Spaces and Indigenous/Aboriginal Health*. 30.

⁵ Subica, A. M., & Link, B. G. (2022). Cultural trauma as a fundamental cause of health disparities. *Social Science & Medicine*, 292, 114574. <https://doi.org/10.1016/j.socscimed.2021.114574>

- Affecting the implementation of the applicable air quality plans (S-10, p. 18)
- Emitting criteria air pollutants ozone precursors (NO_x and ROG), PM_{2.5}, and PM₁₀, for which the region is in nonattainment status (S-10, p. 18)
- Contribute nonattainment pollutants (ozone precursors, PM_{2.5}, and PM₁₀) to cumulative increases in air pollutants (S-12, p. 20).

Below, we offer additional information to expand the characterization of the associated adverse health impacts of this project; we also outline further limitations and questions regarding the feasibility of proposed air quality mitigation measures.

A wide range of health impacts must be considered when evaluating increases in particulate matter pollution.

The DEIR is correct in its recognition that there is strong scientific evidence supporting the association between increased levels of particulate matter and short- and long-term health impacts, including increased mortality and hospitalizations for respiratory and cardiovascular symptoms. (3.3-1, p. 169)

However, the DEIR fails to characterize the following additional adverse health outcomes which have been shown to be associated with exposure to particulate matter:

- **Low birth weight.** Epidemiologic evidence supports an association between prenatal exposure to particulate matter air pollution and a decrease in infant birth weight.⁶
- **Harm to children’s health and development after maternal exposure.** Epidemiologic evidence documents an association between maternal exposure to particulate matter and various long-term, adverse impacts on their children’s health, including the following conditions:
 - **Autism Spectrum Disorder:** There is limited but growing evidence that prenatal exposure to particulate matter is associated with autism spectrum disorder.^{7 8}

⁶ Uwak, I., Olson, N., Fuentes, A., Moriarty, M., Pulczynski, J., Lam, J., Xu, X., Taylor, B. D., Taiwo, S., Koehler, K., Foster, M., Chiu, W. A., & Johnson, N. M. (2021). Application of the navigation guide systematic review methodology to evaluate prenatal exposure to particulate matter air pollution and infant birth weight. *Environment International*, 148, 106378. <https://doi.org/10.1016/j.envint.2021.106378>

⁷ Lam, J., Sutton, P., Kalkbrenner, A., Windham, G., Halladay, A., Koustas, E., Lawler, C., Davidson, L., Daniels, N., Newschaffer, C., & Woodruff, T. (2016). A Systematic Review and Meta-Analysis of Multiple Airborne Pollutants and Autism Spectrum Disorder. *PLOS ONE*, 11(9), e0161851. <https://doi.org/10.1371/journal.pone.0161851>

⁸ Perera, F. (2018). Pollution from Fossil-Fuel Combustion is the Leading Environmental Threat to Global Pediatric Health and Equity: Solutions Exist. *International Journal of Environmental Research and Public Health*, 15(1), 16. <https://doi.org/10.3390/ijerph15010016>

- **Brain development:** There is some evidence suggesting that prenatal exposure to PM2.5 disrupts brain development.⁹
- **Incidence and prevalence of type 2 diabetes (T2D).** There is strong evidence supporting the association between exposure to PM2.5 and the risk of diabetes.¹⁰
- **Cumulative impacts and environmental justice.** The impacts of air pollution are not equally distributed in communities across the San Francisco Bay Area Air Basin.¹¹ We did not identify anywhere in the DEIR that provided an estimate of how air pollution generated will, or will not increase environmental inequities in the region. To this end, the DEIR appears to be lacking a full environmental justice assessment, and as such we recommend utilizing tools such as the CalEnviroScreen 4.0 to conduct the DEIR air pollution estimation through a lens of environmental justice, in addition to considering the profound environmental justice impacts of implementing this project on land that is sacred to the Amah Mutsun Tribal Band.

Overall, the DEIR falls short in assessing the full range of health harms from air pollution, and the Project's full range of environmental justice impacts.

Mitigation Measure 3.3-2a establishes large loopholes that permit circumventing the mitigation measures.

Mitigation Measure 3.3-2a seeks to modify the impacts of toxic air pollution by requiring all off-road mobile equipment and trucks powered by diesel used during the construction and operation phases of the Project meet USEPA Tier 4 engine standards for NOx (3.3-26; p. 194). However, the mitigation measure also provides significant opportunity for exceptions to this standard if meeting the requirement is determined to be infeasible. What does the Department determine to be grounds for an excusal of this requirement? As written, the DEIR falls short of actually ensuring that this mitigation measure would even have to occur in practice.

In contrast, the Greenhouse Gas Emission Mitigation Measure 3.8-1b (S-48, pg. 56) outlines that “the project must replace diesel and gasoline-powered vehicles with electric or other low or zero-GHG emissions equipment as feasible”. Given the impact this decision would have on air quality issues identified in the DEIR, this mitigation measure should be consistent throughout the

⁹ Guxens, M., Lubczyńska, M. J., Muetzel, R. L., Dalmau-Bueno, A., Jaddoe, V. W. V., Hoek, G., van der Lugt, A., Verhulst, F. C., White, T., Brunekreef, B., Tiemeier, H., & El Marroun, H. (2018). Air Pollution Exposure During Fetal Life, Brain Morphology, and Cognitive Function in School-Age Children. *Biological Psychiatry*, 84(4), 295–303. <https://doi.org/10.1016/j.biopsych.2018.01.016>

¹⁰ Bowe, B., Xie, Y., Li, T., Yan, Y., Xian, H., & Al-Aly, Z. (2018). The 2016 global and national burden of diabetes mellitus attributable to PM 2.5 air pollution. *The Lancet Planetary Health*, 2(7), e301–e312. [https://doi.org/10.1016/S2542-5196\(18\)30140-2](https://doi.org/10.1016/S2542-5196(18)30140-2)

¹¹ Southerland, V. A., Anenberg, S. C., Harris, M., Apte, J., Hystad, P., van, D. A., Martin, R. V., Beyers, M., & Roy, A. (2021). Assessing the Distribution of Air Pollution Health Risks within Cities: A Neighborhood-Scale Analysis Leveraging High-Resolution Data Sets in the Bay Area, California. *Environmental Health Perspectives*, 129(3), 037006. <https://doi.org/10.1289/EHP7679>

report. Additionally, the proposed 5-year feasibility re-assessment should consider the impacts that electrification of Project vehicles would have on reducing the health risks associated with poor air quality.

The mitigation does not even require the mine operator to comply with the most recent engine standards developed by the California Air Resources Board (CARB). CARB is currently developing amendments to the off-road diesel engine standards, which will eventually be known as the Tier 5 rulemaking. These amendments are anticipated to be released in 2024-2025.¹²

It is, overall, unclear how the Sargent Ranch Quarry Project will be held to the highest standards of pollution mitigation under this measure, including how potential loopholes will be closed.

The DEIR lacks analysis on climate change in considering the impacts of air pollution and water usage.

California is in a climate emergency. Beyond the estimations outlined in the Greenhouse Gas Emissions section, this report lacks in its analysis of how climate change will impact air quality and water resource availability throughout the project lifetime. (S-48, p. 56).

A) Air Quality

The DEIR fails to consider the impacts of climate change in its air pollution estimations. The tentative schedule of construction, mining and reclamation (page 4-21, p. 633) estimates the Project will continue operating until 2053 and fully close in 2058. According to the description of “Approach to the Analysis” provided on page (3.3-16, p. 184), the Project’s air pollution estimations were calculated using the outputs and conditions during the first feasible year of production, 2024.

Average temperatures, as well as the frequency of heat waves, are already reaching historic levels, and these climate events are only expected to increase in frequency and severity in California in the coming decades. Santa Clara County is projected to see temperature increases of between 3.4-5.8° F by the end of this century, depending on emissions scenarios.¹³ There is a growing body of research on the synergistic effects of heat and air pollution: a recent review of 39 studies examining the interactive effects of heat and air pollution on health outcomes found

¹² California Air Resources Board. 2021.. *Tier 5 Rulemaking Workshop: Potential Amendments to the Off-Road Diesel New Engine Regulations*. 31.

https://ww2.arb.ca.gov/sites/default/files/classic/msprog/tier5/off_road_tier_5_rulemaking_overview.pdf

¹³ Page 12, Maizlish N, English D, Chan J, Dervin K, English P. *Climate Change and Health Profile Report: Santa Clara County*. Sacramento, CA: Office of Health Equity, California Department of Public Health; 2017.

https://www.cdph.ca.gov/Programs/OHE/CDPH%20Document%20Library/CHPRs/CHPR085SantaClara_County2-23-17.pdf

sufficient evidence for synergistic all-cause mortality, cardiovascular, and respiratory effects of air pollution and heat (particularly for ozone and particulate matter).¹⁴

It is not enough to estimate air pollution impacts based on today's climate. The DEIR's assessment of the Project's air pollution impacts is lacking in that it does not consider the reality of climate change, specifically, projected increases in average temperatures and heat waves, and how this will impact pollution dispersion, and subsequent exacerbation of the already adverse health impacts of exposure to air pollution.

B) Water Usage

Dust control is specified as one of two mitigation tools that will be implemented to reduce the negative impacts to air quality that would be produced by the Project. Mitigation Measure 3.3-2b specifies that the Project must "develop and implement a comprehensive dust control plan for Project construction and operation and shall submit the plan to the County Department of Planning and Development" (3.3-26, p. 194). We are concerned with this mitigation measure's reliance on vast quantities of water given the anticipated impacts that climate change will have on water availability in California. The DEIR is unclear as to whether climate change impacts are considered in its estimation of the availability of the quantity of water needed to implement this measure.

The DEIR does not provide estimates of the quantity of water that is expected to be used through this mitigation measure, but it does estimate that dust mitigation will create the second highest demand for water usage, following aggregate processing. The project is estimated to use 86,135 gallons of water per day and 26,742,000 gallons per year during peak production times. (Table 2-5, 2-39, p. 105). For reference, the average California resident uses about 85 gallons of water a day in their home¹⁵; this operation anticipates using as much as 1,000 individuals' water consumption per day during peak production.

There is ample evidence that climate change will impact water availability across California. The California State Water Resources Board recently issued a report projecting that "hotter and drier weather could diminish our [state] water supply by 10% by 2040."¹⁶ California's Fourth Climate Change Assessment of impacts to the Central Coast region estimated that "more extreme droughts and higher temperatures will also alter the natural recharge of groundwater and

¹⁴ Anenberg, S. C., Haines, S., Wang, E., Nassikas, N., & Kinney, P. L. (2020). Synergistic health effects of air pollution, temperature, and pollen exposure: A systematic review of epidemiological evidence. *Environmental Health*, 19(1), 130. <https://doi.org/10.1186/s12940-020-00681-z>

¹⁵ *Residential Water Use Trends and Implications for Conservation Policy*. (2017). Legislative Analyst's Office. <https://lao.ca.gov/Publications/Report/3611>

¹⁶ Page 3, California Natural Resources Agency. (2022). *California's Water Supply Strategy, Adapting to a Hotter, Drier Future*. <https://resources.ca.gov/-/media/CNRA-Website/Files/Initiatives/Water-Resilience/CA-Water-Supply-Strategy.pdf>

potentially exacerbate groundwater overdraft.” More local to the Project, the Valley Water’s Urban Water Management Plan (UWMP) Report Section 3.10 “Hydrology and Water Quality”, which looks at water demand through 2045 for normal and dry years, projects that “Statewide and local changes in precipitation and temperature could impact Valley Water’s water supplies and operations, the effectiveness of potential water supply investments, and water demand patterns...”.¹⁷

From our review of this DEIR, it is unclear whether estimations of water availability through 2045 – for dust suppression and other water usage – fully account for how climate change risks may change water supply and demand.

III. Aesthetics

The preservation of natural spaces is linked to public health

Preserving open space from industrialization has numerous direct and indirect benefits to human health. The DEIR states that the Project will pose “significant and unavoidable” impacts after mitigation to the “visual character of the Project site or scenic resources visible from U.S. 101, a County-designated scenic highway”. (S-10, p. 18). Overall, the Project will disrupt nearly 300 acres of open space (2-1, p. 69). According to the American Public Health Association, the presence of natural features in our communities promote lower levels of “mortality and illness, higher levels of outdoor physical activity, restoration from stress, a greater sense of well-being, and greater social capital”.¹⁸ Preserving the natural elements of this area will have direct benefits to those who live near, drive past, and visit this area.

Conclusion

As health professionals, we are deeply concerned by this project’s potential to adversely impact access to sacred, culturally important lands to the Amah Mutsun Tribal Band. The destruction of cultural and spiritual sites threatens the health and well-being of Indigenous communities. We are also concerned about this Project’s anticipated health harms associated with diminished air quality across the Bay Area; impacts on water resources; and to the loss of open natural lands. We urge the County to **reject the conditional use permit for Sargent Ranch Quarry and choose the** “No Project Alternative.”

Thank you for your consideration.

¹⁷ Valley Water. (2020). *2020 Urban Water Management Plan*. <https://fta.valleywater.org/dl/pggls1SeCr>

¹⁸ American Public Health Association. Improving health and wellness through access to nature. 2013 <https://www.apha.org/policies-and-advocacy/public-health-policy-statements/policy-database/2014/07/08/09/18/improving-health-and-wellness-through-access-to-nature>.

Respectfully,

Robert M. Gould, MD

President, San Francisco Bay Physicians for Social Responsibility

Handwritten signature of Robert M. Gould, MD in cursive script.

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