



June 8, 2023

Steve Kozel, District Ranger
 Northern Hills Ranger District
 Black Hills National Forest
 2014 N. Main St.
 Spearfish, SD 57783
Submitted electronically

Dear Ranger Kozel:

This letter includes our comments on the Draft Environmental Assessment (EA) for the “Golden Crest” gold exploration drilling project proposed by Solitario Zinc in Lawrence County, South Dakota. Our comments are not listed in order of priority, but are generally listed in the order in which they appear in the Draft EA. We conclude that the Draft EA needs to be completely redone or that a full Environmental Impact Statement needs to be developed, as the existing document does not provide the information needed to judge the proposed project, its impacts, or the mitigation measures that are proposed.

- The Draft EA repeatedly notes that the Golden Crest project would take place in an area where there have been timber sales, and that the area is therefore already “disturbed.” This, of course, does not excuse further disturbance. This project would also “disturb” not only the surface of the ground, but also the subsurface. The use of the concept of “disturbed” should not be limited to past impacts on the surface.
- Solitario’s proposed speed limit of 25 mph is too fast for safety in the proposed project area. The area includes a lot of activity by OHVs, mountain bikes, hikers, and campers. A speed limit of 15 mph would be more predictive of safety for users – both Solitario employees and recreationists. The roads/trails the company wants to use are also likely bumpy and poorly graded, making it harder to maintain control of a vehicle.
- The Draft EA says that 62” wide “trails” (a/k/a roads) will be widened, but does not say by how much. This influences the impacts of the project, including the number of acres impacted. The amount of widening of these trails/roads, the specific impacts of this widening, the number of acres impacted, and potential remediation all need to be included in the EA. Things to consider include:
 - Can larger equipment move into the project area if the trails/roads are widened? If so, what are the additional impacts of this equipment?

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- Will traffic be able to go faster, if the roads are widened, and what would be the impacts in terms of safety, air quality, wildlife impacts, etc.?
- Will drivers go faster if the roads are widened, regardless of the speed limit, because of the perception that a wider road is appropriate for faster speeds? What would be the impacts in terms of safety, air quality, wildlife impacts, etc.?
- The Draft EA says that the 62" trails/roads will be widened, then says that no road would be widened. Which is it? What are the different impacts and mitigation needs?
- The proposed project is described as operating 24 hours a day. This provides no respite to wildlife or recreationists. Drilling should not happen 24 hours a day.
- Drilling should not take place within 1 mile of established or frequented camping spots.
- Drilling should not take place within 1 mile of wildlife corridors and areas frequented by birthing/juvenile wildlife.
- The Draft EA says that there would be up to 48 personnel at three drill sites during shift changes. This would have large traffic, noise, and light impacts that would disturb humans and wildlife who have used this area for generations. Some mitigation of this situation must be included in the EA.
- The Draft EA says that there will be personnel at up to 3 drill sites during shift changes. Then it says that one or two drill rigs will be operating at a time. Which is it? What are the different impacts and mitigation needs?
- The Draft EA notes that there are no fire protection measures in the Plan of Operations. What if there is a fire? How would the situation be dealt with to protect humans, vegetation, and wildlife? These and related questions need to be answered in the Draft EA.
- The Draft EA quotes Solitario as saying that there are no perennial streams in the project area, so no water sampling will be done. This is disingenuous. Flash flooding is common in the Black Hills and has become much more common in recent years, according to a National Weather Service study. The Forest Service needs to require water sampling and to determine where and when that sampling is necessary.
- The Draft EA also says that there will be no groundwater monitoring, as there are no monitoring wells in the area. This is an even weaker statement. The company is drilling up to 100 holes. If the project goes forward, they should be required to sample any water they hit using accepted and appropriate scientific methodology. The results should be public and reported in the scientific literature, which would add important data to the relatively little information on the subsurface in the central Black Hills.
- The EA suggests that no runoff controls be present at 20 of the 25 drill pads, if this project goes forward. Only after the fact, if there has already been erosion damage, would controls be put in place. The Forest Service needs to do its own analysis of the need for erosion controls at the 25 proposed drill sites and be proactive about preventing erosion or other damage.
- The company plans to bury drill cuttings at the drill sites. This is suggested without reference to the constituents of the drill cuttings. Drill cuttings could include toxic or hazardous materials and should not be buried at drill sites. They should be fully analyzed and, if needed, disposed of in an appropriate hazardous waste site.

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- The Draft EA refers to a hazardous materials plan that will be done at some point. This plan should be part of the Draft EA, as it would define potential impacts and mitigation of the project. In the alternative, a full Environmental Impact Statement should be completed.
- The cumulative impacts sections of the Draft EA are incomplete and inadequate, including in the summary section, Section 3. It omits consideration of cultural, soils and geology, groundwater, wildlife and fisheries, public health and safety, and socioeconomic impacts. Has the Forest Service checked with tribal governments, Tribal Historic Preservation Officers, and tribal elders about cultural issues? There is at least one overarching issue – the Black Hills are a sacred landscape, including the proposed project area, to a number of tribal nations in the region. What about the impacts on public health of having quiet open lands, recreation, and clean water? What about the socioeconomic impacts of having recreation opportunities that are close to area populations, such as Lead, Deadwood, and Spearfish, so that low-income individuals and families can participate in recreation activities with less expense? These are just a few samples of the issues that are ignored in this and related sections.
- The cumulative impacts section also omits substantial exploration drilling on the east side of Spearfish Canyon, in areas that also drain into Spearfish Creek. This is clearly a cumulative impact, as is the possibility of additional exploration projects popping up along the entire eastern side of the Canyon, which is almost all under active mining claims.
- The cumulative impacts section also omits the impacts of any potential mining that could be the immediate result of the exploration. Consideration of this issue should include consideration of climate change impacts, as resource extraction is a major contributor to carbon emissions – between 10% and 35%, depending on the author’s assumptions. The higher number is the result of a study by the United Nations Environmental Program. The weakness of the cumulative impacts discussions alone is a good reason to redo the Draft EA or complete a thorough discussion in an Environmental Impact Statement.
- The proposal to allow heavy equipment and numerous commuting personnel on what have been “closed” roads is unwise, poor policy, and will have negative impacts on wildlife, water, soils, vegetation, and recreation. These roads will be left open for up to 30 days, which is a long time in the summer when frequent travel takes place in the area. This decision needs to be more thoroughly studied and, if there is a justification, it needs to be provided.
- The Draft EA uses an air quality station in Black Hawk, SD, approximately 34-40 miles from the project site and in an area of completely different ecology, fauna, soils, geography, and weather. Data for the project site needs to be developed and studied to determine air quality impacts of the proposed project and potential mitigation strategies.
- The Forest Service and contractor apparently relied on a “records search” and input from one Tribal Historic Preservation Officer for much of its cultural resources information. In the many tribal nations that hold the Black Hills sacred and have lived in or regularly passed through the area for generations, there are many members who have knowledge of cultural resources who need to be included in the survey process. It is not at all clear from the Draft EA that this has been done. What’s more, the Forest Service, applicant, and contractor have apparently not thought this issue through, as they could not come up

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- with even one cumulative impact on cultural or tribal resources. This work needs to be redone – and done right.
- The Madison formation outcrops at the proposed project site. The Madison formation is an aquifer in large areas around and near the Black Hills and provides water for a number of communities and individual water users. The Draft EA indicates that the proposed project area is a location where water enters the formation, recharging underground aquifers. This does not seem to be considered in any detail in the Draft EA, but could have important impacts over a broad area, if drilling intersected water supplies – especially in an area of sulfide rock. The Forest Service needs to “return to the drawing board” on this issue and insure it is studied thoroughly before moving forward with consideration of this project.
 - Also having to do with sulfide rock – the Draft EA says that if sulfide rock is exposed by drilling, any issues will be resolved by burying drill cuttings. This is inadequate, as has been discussed above, and particularly where sulfide rock is concerned.
 - The Wharf mine, an expanding mine of 7 miles circumference, is about 3 miles from the proposed project area, but is not included in the cumulative impacts in this section. It clearly needs to be considered.
 - Similarly, the proposed project area contributes to the Spearfish Creek watershed, but while groundwater impacts are discussed, potential impacts on the Creek are ignored. This oversight needs to be corrected in either a redone Draft EA or an Environmental Impact Statement (EIS).
 - Potential impacts on water are dismissed as minor, except in the case of “catastrophic storm” impacts on surface water. What would the major impacts be? This question is not considered, and this question is not answered. The EA should include a full discussion of the potential for larger impacts on ground and surface water, including the increasing number of catastrophic storms that are already present in the Black Hills due to climate change.
 - The cumulative water impacts only considers this proposed project and the proposed Ponderosa project. See above for the series of other projects that should be included and considered.
 - The Draft EA indicates that there will be a sedimentation/erosion plan for the proposed project as well as “spill prevention and containment measures.” What are the components of the plan? What are the components of the measures? This information needs to be included in detail in a re-drafted EA or an EIS.
 - In its consideration of impacts on recreation, the Draft EA says there will be impacts on events, but does not say what the impacts would be or how much disruption would be present. This information needs to be included in the Draft EA.
 - The impacts on recreation that are listed in the Draft EA do not include potential traffic accidents, 24-hour noise, disruption of the Black Hills experience, or 24-hour lights. These should be considered, and mitigation should be discussed. In this section, the previous information about traffic is ignored and downplayed. The Forest Service and contractor need to decide which information is accurate and make the document’s sections consistent, so the public and other readers can appropriately judge the situation and the adequacy of the proposed mitigation, which is minimal.

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- The Draft EA says that a sensitive plant species “may” be present. This should be studied further and any needed mitigation identified. It is also unclear what the proposed project “vegetation survey” included, and this information needs to be added to Forest Service documents.
- The Draft EA uses a “tried and true” government agency strategy to avoid real consideration of wildlife impacts and the necessary mitigation. It asserts that wildlife in the proposed project area will leave the drilling areas and then return when the project is complete. No proof is offered of these assumptions. Similarly, the document asserts that species of local concern, indicator species, sensitive species, and listed species are “not likely” to be much impacted by the proposed project, without any proof of those statements. The Forest Service and contractor need to truly study the situation with an eye to finding impacts, rather than assuming they will not occur without proof.
- Cumulative impacts are again minimized in the section on wildlife and need to include all projects mentioned above.
- The Draft EA states that it is as much as one hour from the proposed project area to emergency services, but offers no solution to this dangerous situation.
- The public health and safety section says that the following plans will be developed at some point: hazardous materials spill plan, emergency response plan, and security plan. These plans should all be developed by now, so that decisionmakers and the public know what mitigation would actually involve when it comes to public health and safety. They should have been part of the Draft EA or should now be included in an EIS.
- The socioeconomics and environmental justice section may be the weakest section of the Draft EA and is totally inadequate. The Draft EA should be redrafted or an Environmental Impact Statement completed to consider these and the many other issues that have not been adequately studied, considered, or subjected to mitigation planning.
- In the case of this section, social impacts are not considered at all. Environmental justice impacts are not considered at all, which is of critical importance in a place that is actively under contention by indigenous populations, making all land and resource issues environmental justice issues. Except for the possibility of a minor drop in recreation income, all the economic impacts that are considered would bring more income into the area, which is not the likely reality. Most employees of the project might well come from out of the area, for example. Cumulative impacts are, again, not realistically considered.
- If the socioeconomic and environmental justice section is not the weakest section of the Draft EA, then the tribal consultation section is the weakest. Apparently, two letters were mailed to 16 tribal entities. Two responded, with one saying the project would have no effect and the contact with the other being unclear. There is no information indicating that any actual nation-to-nation formal consultation happened, just a general statement about some form of consultation “in person and/or in writing.” This is another reason that the Draft EA needs to be completely redone to consider all required topics or a full Environmental Impact Statement needs to be done.
- The table showing the scoping comments and the Forest Service’s responses to those comments is too small to read, even for someone with relatively normal vision. This information needs to be reissued in a usable form.

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For these and other reasons, the Draft Environmental Assessment for the proposed Golden Crest project needs to be redone or a full Environmental Impact Statement needs to be completed. There is far too little information in the existing document to identify many of the potential impacts or to judge the adequacy of mitigation plans.

Thank you for your consideration.

Sincerely,



Liliás Jarding, Ph.D.
Executive Director
Black Hills Clean Water Alliance