Data Submitted (UTC 11): 10/28/2020 4:15:31 AM First name: Lloyd Last name: Hess Organization: Title: Comments: COMMENTS OF THE STIBNITE MINE PROPOSAL

## I AM IN OPPOSITION OF GRANTING A PERMIT FOR THE STIBNITE MINE

WHY IDAHO? There are plenty of inactive mine sites throughout the country. The answer is that we have less regulations to impose on such a project

The far majority of impacts on the fish community and humans are sublethal impacts. These sublethal impacts are very hard to document and quantify, but will occur with this project. To minimize these impacts we need to make sure that water quality impacts, especially from heavy metals are minimized. To accomplish this, the permit must make sure that conditions get no worse and actually water quality improves from existing conditions. Improvement is occurring naturally with the passing of every season since the mining was occurring at this location. Adequate mitigation is needed to address NEW mining impacts well into the next century (2100).

## **REMEDIES:**

All mining has long term negative impacts. Proper detail to ways to mitigate those long term impacts have to be put into the permit if re-mining is allowed to occur at the old mine site.

Most past mining operations have become Super Fund Clean-Up Sites. Putting this burden on the people of Idaho and the Federal Government is not justified. Funds for mitigation need to be sufficient to solve all long term problems from mining activity. Since the Forest Service is issuing this Permit----it is reasonable to expect that if insufficient safeguards are not placed on the permit, that future law suits to rectify the problems may and should be directed to the Forest Service for not doing "Due Diligence in their capacity of protection of the environment".

Have 50% of the profits put into a mitigation account that can be used for reparations, until the site is fully restored. This may take well over 50 years.

Make sure that this mitigation fund is protected from Bankruptcy of the original corporation or subsequent changes in ownership. This holding fund must be administered by the State of Idaho, and not used for other purposes. After the project is fully mitigated any remaining funds will be returned to the mining company.

Have a monitoring program initiated to protect water quality and fisheries. Monitoring will be done by the Fish and Wildlife Service, and Idaho Department of Fish and Game; plus EPA and the Idaho Department of Water quality. This program will be paid out of the mitigation fund that reserves 50% of the profits for mitigation.

Have pre-set values for temperatures and water quality that if reached will shut down mining. These would be stringent enough parameters to prevent long term impacts to the fish populations of the nearby water sheds.

## AT ISSUE WITH THE PERMIT:

AS A SCIENTIST THESE ARE SOME OF MY CONCERNS WITH THE MITUS PROJECT

I have 40 years of experience with dealing with environmental problems and impacts of projects similar to the Mitus Project. Major concerns are:

Since the early 1970's mitigation for mercury and other heavy metal contamination has been to leave contaminated material in place, and not to disturb these areas causing release of toxicants.

Studies on heavy metals (iron, aluminium, mercury, arsenic, etc) have shown that fish (especially salmoids) when exposed at young ages and early development will impact reproductivity. This happens even when young are exposed for short periods of time, to a one episode contamination. When exposed for longer periods or more severe contamination the impacts on reproduction are much greater. Thus most exposures are not responsible for the direct killing of the fish, but cause reduced success of reproduction which makes it difficult to recover diminished populations.

Studies on striped bass with rice pesticides have shown that non-lethal exposure ONE TIME EXPOSURE can not only impact the progeny (eggs) within a female fish, but also the second generation of fish within the egg. This impact is again reduced reproductive success. A similar impact can be expected with heavy metals.

Elevated Water temperatures are much more lethal than previously thought. A 70 degree temperature standard does not protect all life stages of trout and salmon. For example it is known that temperatures as low as 64 degrees can impact adult salmon waiting to spawn in upwater spawning areas. The impact from these elevated temperatures is reduced fertility of the eggs when spawned.

## IMPACTS TO MAN:

Someone may ask, why Exposure of fish to heavy metals is so important to MAN. The ANSWER is that fish are only an indicator species of what could happen in MAN. Thus transporting this contaminated water downstream to agriculture areas where it is put on crops that are later eaten by Man, or direct consumption through drinking of this water can have significant impacts on Humans. What would these impacts be? They most likely are reduced productivity either through being harder to conceive or abnormalities in the fetus or young child. This may also explain why there appears to be increases in childhood disorders (autism, etc.).

Why did the Anistoga Indians in the Southwest disappear. It is likely that they disappeared over centuries by increases in heavy metals in their diets. As rainfall patterns change, and with many years of farming these fields with limited water supplies, heavy metals concentrate in the soil and are passed onto the crops and eventually to the people eating these crops. This reduces reproductive rates over many generations, which reduces population and eventually leads to extinction. "There has never been a civilization that had long term survival on irrigated fields where evaporation exceeds rainfall." This is because heavy metals increase to toxic levels. A recent example of this problem is in the Kesterson Area of California, where the drain for the Central Valley project was never completed and heavy metal contamination by selenium caused large numbers of ducks to die.