Dear Mr Grant Pfeifer

Thank you for the opportunity to share my comments and concerns regarding the HiTest/PacWest Silicon Smelter/metal processing facility. I am a resident of Spokane, WA and also a frequent visitor to the area, where my family enjoys the beauty peace and quiet, play on the Pend Oreille River and hike in the nearby forests. One of my favorite hikes is around Bead lake, only13 miles from Newport WA and whose water lives up to its name and is an amazing jewel-like color.

I understand that in the process of evaluation, there are ranges of acceptability in data points, technology efficiency and so forth. I urge you to *apply the most stringent of standards within the law for all data used, for all measurements and models, and analysis of expected hazardous processes and waste*.

If scoping moves forward, I urge you to require all development to achieve the absolute lowest achievable emissions rate (LAER), proactively address the potential for heavy metal contamination of the site and surrounding area's soil and ground water.

Following are some the things I feel merit analysis and consideration.

The Newport location is a Greenfield property. This is not best practice.
The reuse of former industrial sites is encouraged. Placing the HiTest/PacWest Silicon smelter facility in this location creates a large, brand new brownfield property when there are existing and available brownfield sites. One of these existing sites was the Addy location.

There must not be a a net loss of ecological functions as a result, and there shall be no adverse impacts the peaceful enjoyment of resources. Ecological restoration measures should be included as conditions of approval unless demonstrated to create a hazard to life or property.

Impact on soil, local gardeners and farmers and wildlife food sources
Analyze impacts to soils, vegetation and nutritional quality of the soil. Analyze the potential for heavy metal contamination of local farm produce growers' produce and animal feed as well as wildlife food sources. We all ultimately will be eating these things, whether carrots from the farmer's market, or locally raised chickens, eggs and goat cheese, or deer and elk meat.

What is the absorption rate for people who eat these foods? Especially the more vulnerable such as children, the elderly and those who are immune-compromised or have an auto immune disease.

Evaluate the impact on native species of plants' ability to compete with invasive species. Here are a few of the local invasive species. In particular, hawkweed and spotted knapweed and milfoil plants can out compete native plants. Will acid rain, and/or poor air quality, further fuel the competition between native and invasive species? Here are some other invasive species http://invasivespecies.idaho.gov/plants/
https://www.nwcb.wa.gov/pdfs/Eastern_WA_fieldguide.pdf

Water.
The HiTest/PacWest Silicon/Metal Smelter is within 2 miles or less of Newport and Old Town's water recharge zones, the Little Spokane River Aquifer Basin, and Pend Oreille River.

Please study the impact on ground water and surface water contamination in the greater Newport WA area and also the Little Spokane River basin.

The volume of water HiTest/PacWest is proposing could impact the city of Newport, residents with private wells and the Little Spokane River.

The water rights of private wells owners may be at risk.
Whatcom vs Hirst WA Supreme Court decision. That decision, which clarified that Washington's Growth Management Act requires counties to protect ground and surface waters by ensuring there is enough water available to accommodate growth before more development is authorized. It also clarified that residential wells — which do not require a state permit — are not currently managed to ensure protection of our water resources.

We too get our water from a well and this is deeply troubling. Please study impact on private well water quality, quantity and long term viability.

The little Spokane River is a popular recreational for kayaking floating and wildlife watching, including moose. It is home to a Great Blue Heron Rookery, We must ensure there is sufficient water to maintain the health of the Little Spokane River and its wild inhabitants. With less water brings higher concentrated contaminates into the Little Spokane watershed and downstream the Spokane Aquifer.

Violates the Comprehensive Plan.
This development is in violation of the local comprehensive plan and development regulations. The Pend Oreille County Comprehensive Plan, states development should "protect the environment and enhance the state's high quality of life, including air and water quality and the availability of water." Urbanizing and Industrializing Newport, WA does not fit into our stated development plan, or our rural and outdoorsy way of life. We need to preserve the rural spaces where small farms, small businesses, can thrive and outdoor enthusiasts and tourists can enjoy away from the urban fray and pollution.

Please study the Pend Oreille County Comprehensive Plan, and laws surrounding its implementation.

The Newport infrastructure is not able to support this.
Pend Oreille County, City of Newport and the surrounding areas do not have the infrastructure, law enforcement, medical facilities, first responders, rail and road systems, tax structure, water/sewer systems, and perhaps most important, the electrical power grid, to support the construction and operation of the HiTest Silicon Smelter Processing Facility.

In addition, please factor in the impact of other commercial growth and expansion associated with the HiTest/PacWest Silicon/Metal Smelter on infrastructure, water use and quality, air quality and additional undesired brownfield contamination.

Newport citizen taxpayers would be burdened.
Additional costs such as increased property taxes, utility taxes, water/sewer rates and infrastructure improvements would result in area residents paying for the construction and operation of the facility.

Too close to schools and residential areas.
The HiTest Silicon Smelter/Metal Processing Facility would be located within a two-mile radius of the cities of Newport WA and Old Tow, ID its residents, eleven public and private schools, daycare centers, Newport Hospital and Health Center, senior citizen apartment complexes, Long-term care and private extended care homes.

Of particular concern is the relationship between clean air and healthy development of children. Long-term exposure to outdoor air pollution can significantly impede healthy brain development in children, according to a 2018 study (D'Angiulli, 2018). Because outdoor air pollution can play a key role in indoor air quality, children that attend school in Newport schools are more at risk of exposure to airborne pollutants not only from the facility, but also the transportation, offloading and other processes performed outside the facility.

Recreational activities.
Newport WA is on the Pend Oreille Valley Scenic Byway and is part of the international Selkirk Loop, which draws families, tourists, motorcycle, bicycle and car clubs, and outdoor enthusiasts year round to enjoy the rich beauty and wild forests of the Colville National forest. Its winding and scenic route is often one lane each way. Filling the route with congested roads, heavy semi truck traffic does not align with the spirit or purpose of a scenic byway and spoils the experience.

Recreational camping and private cabins line the shores of the Pend Oreille River. Often the prevailing winds blow to the east, toward all those homes and areas of greatest recreational activity. The afternoon breeze is frequently strong enough to cause whitecaps on the Pend Oreille River.

Please study how far particulates will travel – and how that would affect the most vulnerable of populations in nearby Priest River, La Clede, Lower and upper Priest Lake. Also analyze the effects of long-term exposure to the particulates for residents of these towns.

Install and maintain the Best Available Control Technology
It is incumbent upon ecology to enforce that HiTest/PacWest Silicon/Metal smelter research and install the Best Available Control Technology (BACT). Evaluation of BACT requires a high degree of technical judgment, and Ecology must also employ an technical and practical expert in the field to ensure that no corners have been cut and the best options have been offered.

The BACT research and potential solutions must include an exhaustive search and must include examples form across the globe, if the technology and procedures are demonstrated and available. Available in this sense means it is commercially sold. It is not limited to what is available "now", in this state, or any other criteria.

Proposed technology must meet the 90% efficiency or higher for elimination of hazardous emissions and/or waste of all kinds.

Recommendations of less than 90% efficiency must be accompanied by thoroughly documented and sound science. A commensurate reduction in the scope of the planned project and future growth, modification or expansion of the facility *should also be implemented.*

Specifically a 90% SO2 Scrubber should be installed, not the inferior bag house technology. All deviations must be explained in detail. One example might be the Spokane Waste to Energy Plant for example, which can scrub 90% SO2 instead of using a bag house.

Extra parts for critical processes must be kept on hand and in working order.

Best available data sets for air quality, modeling.
Careful study of the geography, number of days of air inversions and its effect on particulate accumulation, the amount of particulate matter that is existing including the seasonal emissions from heating with wood stoves should be made. The frequency of forest fires in recent years must be included as data points. *Accurate and current data must be collected that reflects all of these specific and local factors.*

Proxy data currently being used is UNACCEPTABLE as there are no accurate records from which to develop an accurate model. Key information is missing.

If modeling is selected over taking a year's worth of ambient measurements, the model should account for expected emissions and effluents based on the planned and future full sized facility – for example if ultimately the permit will allow 4 stacks, then the model should reflect that.

When evaluating the impact on air, the analysis should include both the direct effect of source emissions on air quality and health of Newport residents as well as other topics listed in this letter, as well as the indirect impacts from general commercial, residential, industrial, and other growth associated with the proposed project. Analysis should also include the impact of any future plans for expansion.

Data should reflect average as well as worst days.
Modeling should factor in days where a breakdown of a system or process causes an excess amount of emissions or contamination. Allowable levels should be adjusted down to accommodate an average number such situations as has been demonstrated in other smelting facilities, including those that have been shut down. What Ecology ultimately could permit should fall well below the upper limit of what is legally allowed, in order to allow for days where output will be unusually high, or for days where weather or forest fires impact air quality.

Forest fires
When considering modeling data, forest fires must be accounted for in the overall air quality. According to University of Washington professor Dan Jaffe, Washington is experiencing what officials call a "categorical shift" in the wildfire season — fires are growing more intense and longer. http://mynorthwest.com/1055916/washington-wildfires-smoke-days/? And while the average

particulate matter air quality has improved across the nation, that is NOT true for wildfire-prone areas http://www.pnas.org/content/early/2018/07/10/1804353115
On Airnow.gov neighboring Bonner County had *12 days in both 2015 and 2017 that ranged from unhealthy for all people to hazardous*. There are no data for Pend Orielle County yet that smoke darkened our skies too.

Flora and Fauna
The diversity and balance of our ecosystem including the living and inanimate aspects are vastly underestimated. We do not always know what role a plant or animal has in the ecosystem until its too late. Please evaluate the impact on:

- Pollinators such as honeybees, bumble bees such as white shouldered bumblebee, black tail bumblebee, half black bumble bee
- Woodland Caribou rely on arboreal lichens and deep snow packs in order to reach them. Analyze the impact on the long-term viability and nutritional value of the lichens and the impact of greenhouse gas on the snow pack.
- Roosevelt Grove of Ancient Cedars and other Old Growth Groves are regional treasures and though we think of them as being able to survive anything we should not make that assumption.
- The endangered Selkirk Grizzly population.
- The white bark pine whose seeds can provide needed fat calories for grizzlies in the fall.
- What impact will it have on the undesirable spread of white pine blister rust, a fungal disease already present.
- Moose, specifically how low water or contaminated water and water plants could harm the moose.

Thank you for your time and diligence in evaluating the HiTest Silicon/Metal Smelter in Newport, WA and for considering my comments.

Judy