



Mike Petersen
Executive Director
The Lands Council
25 W. Main, Ste 222
Spokane, WA 99201

October 24, 2018

Grant Pfeifer
Eastern Regional Director
Washington Department of Ecology
4601 N. Monroe

Dear Director Pfeifer,

The Lands Council would like to provide comments on the proposed PacWest Silicon Smelter, during the scoping period. We are incorporating our letter of March 14, 2018, which is Appendix 1, which encouraged more attention to airshed modelling and data capturing.

In addition, we would like to ask that a thorough analysis of the air emissions from the smelter, and alternatives to the proposed design be incorporated into the analysis.

Citizens in Pend Oreille and Bonner Counties are rightfully concerned about the emissions that might come from the facility, including sulfur dioxide, nitrous oxides, carbon dioxides and particulate matter. Specifically we ask that the following be considered.

The use of coal from Kentucky is planned to provide the carbon needed in the smelting process. We believe there are better options that would substantially reduce the sulfur dioxide. One of those options would be to use locally produced biochar. Biochar, which is activated carbon, can be produced from wood or agricultural waste products, such as slash piles, seed milling residue, crop residue and other plant materials. It would be much lower in sulfur content, create jobs locally, and would also avoid transportation costs and diesel emissions.

Power plants, smelters, industrial furnaces, waste-to-energy plants all release nitrous oxides. Filters and scrubbers can eliminate much of this nitrous oxide, which, like sulfur dioxide, can lead to acid rain. The silicon smelter must use a state-of-the-art air pollution control system,

which would include an acid scrubber to neutralize acid gases with a slurry of lime and a baghouse, which works like the filter in a vacuum cleaner trapping particulate matter with a series of "gortex" fabric filters. Ecology should conduct a thorough analysis of reducing the nitrous and sulfur oxides. One technique for reducing nitrous oxides is the flue gas cleaning technology, Selective Catalytic Reduction (SCR). We request that the use of SCR technology be analyzed. Mitigation of other expected air emissions, including PM2.5 emissions, must be analyzed.

The carbon dioxide emissions are massive. PacWest claims that at least half of the silicon produced would be used in solar panels. What commitment is PacWest making that this would actually occur?

There are other potential contaminants, depending on the process, including mercury, carbon monoxide, etc. The analysis should look at the range and levels of pollutants and how they would be treated. We are asking how many furnaces are planned at the facility and what model/type they are? We also ask that projected future emissions if the smelter expands be analyzed.

Startup, shutdown and intermittent use can give off very different emissions than continuous operation. What best management practices (BMP's) will be used during the smelting operation?

The proposed location of the smelter has moved from one controversial site to another. Is the current siting a given or will Ecology look at other areas in Pend Oreille County.

There have been claims about water usage and disposal. The source and quantity of that water should be addressed.

As our region makes efforts to transition away from fossil fuels to solar and wind, we must insist that renewable energy also be done in an environmentally and socially responsible manner.

Sincerely,

A handwritten signature in black ink that reads "Mike Petersen". The signature is fluid and cursive, with the first name "Mike" being larger and more prominent than the last name "Petersen".

Mike Petersen, Executive Director

Appendix 1

March 14, 2018

Grant Pfeifer
Eastern Regional Director
Washington Department of Ecology
4601 N. Monroe
Spokane, WA 99205

We write to submit documented written comments related to the proposed HiTest Silicon smelter proposed for location in Pend Oreille County near Newport, Washington. Within we identify our concerns and requests related to air quality analysis modeling.

According to the Washington Administrative Code (WAC), Chapters 173-400-700 to 750 (<http://apps.leg.wa.gov/WAC/default.aspx?cite=173-400>), the Washington State Department of Ecology (Ecology) must conduct a review of all new major stationary sources under the Prevention of Significant Deterioration Permitting Program. One component of this program requires that new major stationary sources conduct air quality analysis modeling. To ensure that this modeling is accurate, Preventions of Significant Deterioration (PSD) permit applicants are required to submit a modeling protocol for Ecology approval. The modeling protocol being suggested by HiTest is the AERMOD modeling program.

We request that Ecology consider the following recommendations, before approving HiTest's modeling protocol.

The AERMOD Modeling Program is recommended by the USEPA for estimating the impact of new or existing sources of pollution on ambient air quality levels at source-receptor distances of less than 50 km. The program constructs hypothetical distribution models for pollutants based on inputted meteorological data. The current proposal from HiTest Silicon will use non site specific meteorological data to construct a distribution model. Essentially hypothetical data inputted into a hypothetical model. The results of such a model are insufficient to determine potential dispersion from the HiTest site.

The Lands Council calls for the Department of Ecology to require HiTest to collect, at a minimum, one full calendar year of on-site (site-specific) meteorological monitoring data for both Class I and Class II modeling prior to proceeding with the air permitting process. It is vital that on site data be used to model pollutant dispersal. Using AERMOD or the Weather Research and Forecasting Model (WRF) is only acceptable if real data collection is cost prohibitive or infeasible. Neither is the case for the proposed HiTest site.

The unique meteorological and topographic features specific to the area where the smelter is proposed would influence emission dispersal due to the distinctive valley and mountain topography of the Pend Oreille River Valley. Elevations in the Washington portion of the Pend Oreille River sub basin are highly variable, ranging between 1,700 feet to more than 7,300 feet above mean sea level. The mountain ranges associated with higher elevations in this area are located perpendicular to the prevailing weather, which leads to site specific air movement as air masses are forced to rise and cool along the varied topography.

The proposed data observations from a 10-meter meteorological tower operated by the Idaho Department of Transportation (ID41, mesowest ITDA8, Old Town) and National Weather Service surface data observations from Deer Park, WA. Upper air data will be prepared using NWS data from Spokane, Washington, appear to have a high likelihood of under-representing the weather conditions typical of the proposed smelter site. The Deer Park station is located roughly 23 miles from the proposed smelter site and, as a result, is located in an area with a far different topography, and likely weather patterns, more closely associated with the steppe or plains topography of central Washington.

While the ITD station near Old Town is closer to the proposed site, roughly 1.25 miles away, we are concerned that this particular weather station may not meet the applicable EPA sensor siting guidelines. If this is the case, the data collected from this station will be insufficient to properly conduct the air quality impact analysis required under the PSD Program.

We call for Ecology to require HiTest collect the most accurate and representative meteorological data, from which an accurate air quality impact assessment may be developed. To achieve this, we request Ecology require HiTest collect at least a full calendar year's worth of on-site weather data.

We recommend Ecology require that HiTest model, as a condition of its PSD modeling obligations, the deposition of the pollution associated with the proposed smelter in order to evaluate any impacts to lichen growth in the surrounding area. Several species of lichen in this area are critical to the survival of the federally endangered South Selkirk herd of woodland caribou. South Selkirk herd subsist almost exclusively on lichen during the winter months. Lichen have been shown to be sensitive to air pollution. Lichens can be harmed by a variety of pollutants, including the following HiTest smelter emissions; sulphur and nitrous oxides, which reduce to sulphuric and nitric acids (components of acid rain), fluorides, ozone, hydrocarbons, metals such as copper, lead, and zinc as well as particulate matter.

HiTest has proposed a smelting facility with two arc furnaces, but leaves room for two additional furnaces to be constructed on site. Given HiTest's willingness shape its current plans to accommodate more furnaces, HiTest should be equally willing to apply this forward-thinking approach to its PSD modeling protocol.

The prudent and responsible approach to this project requires HiTest develop and apply its dispersion modeling, using on site meteorological data and include an air quality impact assessment reflecting the full potential of four furnaces. On a related note, we would ask Ecology to consider an air model run where the HiTest smelter uses charcoal (or biochar) as a reductant, instead of coal. This would eliminate most of the sulphur dioxide emissions, as well as reduce mercury and lead emissions.

Respectfully,

Mike Petersen
Executive Director
The Lands Council

Robert Truckner, M.D.
Board of Directors
The Lands Council

Greg Gordon, Ph.D.
Board of Directors
The Lands Council