

Bob Eugene

Grant Pfeiffer
Department of Ecology
4601 N Monroe St
Spokane, WA 99205

Grant,

I have multiple concerns regarding potential adverse environmental impacts relating to the proposed silicon smelter that is currently intended to be sited near Newport, WA.

The concerns outlined below are not prioritized, but the accumulation of impacts should disqualify the current proposed site for such an industrial facility. Please include all the items below in the scoping for the Environmental Impact Study. Please study all of these concerns in detail and utilize reliable methods to clearly and accurately identify the impacts.

Regarding location

The site that PacWest selected for the proposed silicon is one of the most environmentally deleterious site that could be considered for this major industrial polluter. This site is not conducive for such a heavy industrial facility. Other locations should be further considered, such as Addy, WA which previously had a smelter and is more suitable for a silicon smelter. Wenatchee had a smelter closure utilizing the same quartz mine in Golden, B.C in the supply chain. Another possibility would be Moses Lake, near the market for the "end product" that is being proposed for the Newport Site. An even better site would be Golden, B.C. near the quarry. These alternative sites should be included in the scoping of the EIS.

The proposed site is in an area that has no volunteer or professional fire protection. Additionally, in the fire districts within Pend Oreille County, the typical firefighting vehicles are typically brush trucks, fire engines and water tenders. When there is an unintended fire in the proposed smelter, appropriate firefighting equipment would include extension ladder trucks. Without appropriate equipment and training, both employees and first responders are placed in untenable positions. The smelter needs to be located in a location that has sufficient professional firefighters and equipment to control and secure any anticipated fire. The coal, charcoal and wood chips provide more than an adequate amount of fuel to overwhelm any currently available firefighting equipment.

Regarding air quality

The land contours near the Newport area site tend to trap air-borne contaminants within the multiple river and stream valleys, rather than dispersing contaminants across a large area as would be possible in a flatland area. Many traditional modeling techniques fail to accurately meet project the actual reality of the impacts. How are you going to guarantee that the model used to project the future air quality with reality? The currently usually healthy air is likely to become unhealthy for those with weak immune systems such as the very young and the very old, which reflects the population of the area. How are you going to assure compliance with WAC 173-406? Any modeling should be based on the current worst case scenario which includes both stagnant air and off site smoke impacting air quality from wildland fires that are increasing in impact and frequency based on recent history.

The smelting process will adversely impact the global climate. The carbon footprint of the smelter operations, and the reduction of carbon sequestering as our forests become unhealthy because of the acid rain from the NOx and Sox releases into the air stream. Please make sure that these impacts are thoroughly studied in the EIS.

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As demonstrated in the map above, the topography in the vicinity of the proposed smelter is extremely complex. In order to "model" the environmental impacts of air-borne emissions, the model must first be demonstrated that it is sufficiently robust to be suitable for the complex topography. It has been related to me that sometime in prior years a project that engineering firm CH2M Hill, had some involvement in was denied because of the impact of "trapped" emissions within the Pend Oreille River Valley as it was modeled.

Additionally, at this time, there is inadequate data regarding the current "background" quality of the air. Prior to modeling, there should be site specific air monitoring for prevailing wind direction and quality of air for no less than twelve months. Utilizing data from Deer Park or other monitoring station would not be appropriate for the complex topography surround the proposed site for the PacWest silicon smelter.

The air quality impacts for the Pend Oreille River Valley, both upstream and downstream, the valleys leading to Priest Lake, the valley leading to Sandpoint and Lake Pend Oreille, the valleys leading to Diamond Lake and Sacheen Lake and the valley leading to Blanchard and beyond should be specifically modeled.

Regarding water quality/quantity

The proposed site is directly above an aquifer that currently provides water for the city of Newport. Contaminants that are imported from Canada, overseas, and shipped from across the nation will leach into the ground water, causing contamination. How are you going to guarantee that the ground water will not be degraded with from the imported poisons from other areas? How are you going to comply with WAC 173-200-030?

The proposed site impacts both surface and ground water in the Little Spokane Basin based on USGS maps, (HU 17010308). The Little Spokane Water Basin is already stressed with current water rights allocations extending into the north Spokane area. The ground water aquifer serves Newport and potentially co-mingles with the Rathdrum Prairie aquifer which service the metropolitan Spokane residents.

The smelting operation will be releasing chemical compounds in the exhaust stacks that will cause acidification of our forests and surface waters. The Pend Oreille River, Sullivan Creek, Sullivan Lake, and Calispell Lake have been designated as Shorelines of Statewide Significance. How are you going to protect these bodies of water from acidification and furthermore protect the species of fish that are threatened or sensitive or amphibian species? How will you protect the fowl that use these bodies of water as their home or along their migration route?

The proposed site currently drains surface water into the Oidneys Pond which is the headwaters feeding into the Little Spokane River. Contamination of this nearby critical water body will have an impact throughout WRIA 55. The Little Spokane water basin covers approximately 679 square

miles. How do you propose to protect this critical 49 mile long water channel? What are the cumulative impacts for this critical water source for both the short term and the long term? How many years will it take to flush out all of the poisonous contaminants from the smelter operations that will leach into the ground and surface water for decades after the smelter closes down?

The proponent has asked the city of Newport if it could supply 240,000 gallons of water per day. The EIS should clearly identify the maximum quantity per day that could be used without adversely impacting senior water right holders and without adversely impacting the recharge zones for existing municipal wells. The anticipated water demand would likely be related to the type of control of the waste products being expelled through the stacks to atmosphere. The scope of the EIS should identify the Best Available Control Technology by comparing the effluent utilizing a dry stack system compared to the effluent utilizing a wet stack system. Usually, the wet stack system removes a significantly greater amount of effluent than a dry stack.

Regarding transportation

The most recent site plan provides for surface vehicle traffic, both employee and visitor access as well as truck traffic in and out from new non-existent roads extending between Idaho Highway 41 and the proposed smelter. Since these roads will be located in an adjacent state, I believe that the SEPA review should be broadened to a NEPA review. Additionally, under consideration is a hybrid rail/truck consideration with the transfer of products from rail to truck in Idaho. Why is Ecology trying to avoid the more robust National Environmental Policy Act review?

Considering the distance that the "raw" materials will be shipped from the location of origin, I believe that the air quality and climate change incremental adverse impacts from need to be considered and calculated as additional air quality degradation and, additionally the impacts along the transportation route for the coal dust and other impurities dropped in transit. The access to and from Idaho Highway 41 and the smelter will need some type of control to assure safety and to avoid accidents that may further adversely impact the environment.

The rail spur loop that was added to the site plan recently is being placed on a bench about 140 feet below the floor of the smelter. The conveyor belt between the rail and the raw material holding bins will likely allow a significant amount of very small particles to fall or blow off the belt and contaminate the soil, surface waters and ground water over time. Even at this lower elevation, there is no feasible route to extend a spur railroad line to serve the proposed smelter within railroad limitations for maximum grade.

The anticipated access roads and rail spur will significantly change the drainage patterns and could have a negative impact on both surface and ground water. Contaminates imported from Canada, Kentucky and elsewhere will leach into the soil, surface water and ground water. Additionally polycyclic aromatic hydrocarbons (PAH) will be a byproduct of the smelting operation. It is likely that significant amounts of PAH will be transported by air to humans and to multiple water bodies in proximity. What will be the impact of PAHs on residents and wildlife in Pend Oreille and Boundary Counties? The Pend Oreille River which is a fresh water body of statewide significance. Ecology's regional office in Spokane is the responsible agency for the degradation of air quality in Pend Oreille County. Please include these impacts in the environmental study. The projected contamination and corresponding impacts should be based on the cumulative impacts over at least a 50 year period, and include anticipated increases in capacity that PacWest (HiTest) has previously announced.

How can you environmentally justify the multiple impacts for the proposed siting of the silicon smelter?

Regarding marketing of products

The processed refined castings that are the primary product being produced are easy to transport. However, when it goes through the next stage for manufacture of "solar cells", the castings will need to be sawn to make thin wafers and processed to improve the purity of the solar cell wafer. During this process, approximately fifty percent (50%) becomes a waste product. This additional process is also requires a great amount of electrical energy before solar cells can be manufactured. The proponent also has indicated that fifty percent (50%) of the reduced silicon will be marketed for other than solar cell manufacturing. As such, no more than twenty-five (25%) of the annual capacity of product should be considered as "green energy" offset for the dirty energy utilized in the processing of the silicon castings.

The proponent has repeatedly claimed that there would be no danger of silicosis for workers because there would be "no crushing" of any of the products. The one-line diagram submitted to Ecology illustrating the Silicon Smelting Process clearly shows product crushing, screening and dust capture with fines exhausted to atmosphere. How does this protect the citizens in Pend Oreille and Bonner Counties from cancer due to silicosis?



