

Commenter	Agency/Group	Document Name	Section	Sub-Section	Page	Figure/ Table	Comment
Heidi Zimmer	Alaska Community Action on Toxics	Wishbone Hill Mine Draft Health Impact Assessment	1.0 Introduction	1.4.3.1 Comprehensive HIA	3		<i>"The hallmark of a comprehensive HIA is collection of new data, to address critical data gaps identified during the scoping process...A comprehensive HIA may be appropriate for projects that involve: ... Major disruption of subsistence practices; Major impacts to key social determinants of health; and information gaps related to a well-known aspect of a project.(WBH HIA pg 3)"</i> Based on these criteria, a comprehensive HIA should be done for the Wishbone Hill coal mine before any mining activity is permitted. Critical data gaps for this mine include: inadequate baseline water quality, inadequate groundwater and aquifer mapping, unknown risk of surface and groundwater contamination, lack of noise studies, lack of light /visual effects studies, lack of information on physical effects of blasting, unknown risk of air pollution by both diesel exhaust and particulate matter (PM _{2.5}), and inadequate data on the risk of accidents from coal transportation. Numerous people in Chickaloon Village have described the subsistence and other traditional practices that would be disrupted by this mine. Key social determinants of health, such as psychological distress and community conflict are already well-known problems related to the proposed mine, and these will worsen significantly if the mine is developed.
Heidi Zimmer	Alaska Community Action on Toxics	Wishbone Hill Mine Draft Health Impact Assessment	2.0 Places, Persons, Project	2.12.1 Blasting	21		Usibelli plans pre-blast surveys, if requested, and notification, but these measures will only record the extent of property damage that occurs. Usibelli should also be required to fully compensate residents for all property damage caused by blasting.

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Heidi Zimmer	Alaska Community Action on Toxics	Wishbone Hill Mine Draft Health Impact Assessment	2.0 Places, Persons, Project	2.12.1 Blasting	21		"Rob Brown, UCM stated that the local geology and geography will produce significant natural noise attenuation". This statement is not supported by any evidence, just the word of Usibelli's representative. Several local residents have stated the opposite, backed by observations of noise traveling across and echoing through the river canyon. Why are their statements not considered equally with Rob Brown's communication? This data gap should be filled by a simple noise study, not by hearsay.
Heidi Zimmer	Alaska Community Action on Toxics	Wishbone Hill Mine Draft Health Impact Assessment	2.0 Places, Persons, Project	2.12.2 Mine Facilities; Land Transportation Corridor 2.12.3 Mine Facilities; Hours of Operation	21-22		The hours of operation for mining activities, which cause exposure to noise, blasting, fugitive coal dust and diesel fumes, are misrepresented. The HIA describes daytime operation only for the mine, but claims that the coal trucks will run at night. Trucks will make multiple trips per shift, so coal loading and truck traffic will add to the noise, coal dust, light, and diesel fumes all night, disrupting sleep and increasing local exposure to airborne contaminants. Usibelli's permit application also includes 24/7 operations with no restrictions or mitigations, so there is no documented basis for daytime-only mining operations.

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Heidi Zimmer	Alaska Community Action on Toxics	Wishbone Hill Mine Draft Health Impact Assessment	2.0 Places, Persons, Project	2.2 Potentially Affected Communities	9	Table 2	Sutton-Alpine includes the mine access road, so much of Zone 2 is actually less than three miles from mining operations. People in this area may be close enough to be exposed to diesel exhaust, blowing coal dust, noise, and blasting damage. The zones need to be rearranged to accurately reflect the populations in close proximity to the mine. The zones also should reflect distances from the permit boundary, including the access road, not some point in the middle of the mine operations; this would more accurately depict the proximity-based effects of the mine operation on homes and people. The transportation corridor zone should include the whole route from mine to port. This zone leaves out the more heavily populated area between Palmer and Wasilla city limits along the Parks or Palmer-Wasilla Highways.
Heidi Zimmer	Alaska Community Action on Toxics	Wishbone Hill Mine Draft Health Impact Assessment	2.0 Places, Persons, Project	2.5.1 Sutton-Alpine	12-13		This is an inadequate description of the Chickaloon Tribe. If they are included in the Sutton-Alpine community, then this section should include the full history of the Tribe's use of this area and the cultural devastation and conflict caused by coal mining throughout the 20th century. Also, on pg 13, a one-sentence mention of the Palmer Correctional Center is in the middle of the Chickaloon Village description. This is misplaced, and the population and demographics of the Palmer Correctional Center should be described in more detail in a separate section.
Heidi Zimmer	Alaska Community Action on Toxics	Wishbone Hill Mine Draft Health Impact Assessment	2.0 Places, Persons, Project	2.5.1 Sutton-Alpine	12		The number of residences and the proportion with private wells should be included for this area as for the other communities in Zones 1 and 2. There are hundreds of residences in Sutton-Alpine that rely on private wells and are near enough to the mine to risk contaminated groundwater. This risk cannot be evaluated without knowing how many are involved and at what distance and direction.

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Heidi Zimmer	Alaska Community Action on Toxics	Wishbone Hill Mine Draft Health Impact Assessment	2.0 Places, Persons, Project	2.8 Environmental Justice	16-18		This definition of environmental justice is a federal one based on urban demographics that does not address the cultural implications of the Native Village of Chickaloon. Tribal members use the land for hunting, fishing, food-gathering, cultural education and other traditional activities. Subsistence and traditional uses of the land are ignored or dismissed throughout this document. The HIA should use a regionally appropriate definition for environmental justice that recognizes the disproportionate effect that both historic and future coal mines have on Alaska Natives, and the Chickaloon Tribe in particular.
Heidi Zimmer	Alaska Community Action on Toxics	Wishbone Hill Mine Draft Health Impact Assessment	3.0 Stakeholder Engagement	3.3 Social Determinants of Health 3.4 Accidents and Injuries 3.8 Chronic Diseases	25-40	Table 10 Table 11	The summaries of stakeholder concerns inaccurately give both positive and negative impacts equal weight, which does not reflect the overwhelming majority of comments raising concerns about the potential negative impacts. This obvious bias is repeated in Chapter 7, and reflected in the justification for the rankings for Social Determinants of Health and Chronic Diseases.
Heidi Zimmer	Alaska Community Action on Toxics	Wishbone Hill Mine Draft Health Impact Assessment	4.0 Baseline Conditions	4.4.3 Traffic and Accidents 4.4.9 Potential Data Gaps	56-60		Annual daily traffic counts are provided for all segments of the coal transportation corridor, but accident data is only provided for the Glenn Highway. This data gap should be included in section 4.4.9.

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Heidi Zimmer	Alaska Community Action on Toxics	Wishbone Hill Mine Draft Health Impact Assessment	4.0 Baseline Conditions	4.5.3 Key Findings Groundwater/Hydrology	63		"groundwater from the bedrock units exceeds drinking water standards for other various parameters" These parameters and exceedances should be listed. In the next paragraph, "no significant water quality problems were identified in the groundwater of the Moose Creek watershed". These appear to be contradictory statements. This section should be more clearly explained, and the exceedances quantified. These key findings are based mostly on data collected more than 20 years ago using detection limits higher than drinking water standards. Restoration work on Moose Creek may have affected groundwater. The lack of recent water quality testing using appropriate methods should be identified as a data gap.
Heidi Zimmer	Alaska Community Action on Toxics	Wishbone Hill Mine Draft Health Impact Assessment	4.0 Baseline Conditions	4.5.4 Groundwater Potential Issues	63		Potential groundwater contamination is not adequately addressed and the risk to human health is underestimated. The information on groundwater is contradictory and the hydrology of the area is not fully mapped. Also, the list of "users of surface water and groundwater", i.e. drinking water, in the area is from 1991; more recent data should be available. These are crucial data gaps that should be filled before permits are issued. "adequate monitoring of the mine operations should be provided to ensure compliance" Monitoring ensures only compliance with a requirement to monitor. Monitoring may record water quality degradation, but does not prevent it. Water quality degradation in this case implies an increase in potential carcinogenic and teratogenic contaminants (heavy metals and sulfur), so the "potential issues" discussion should include possible effects on human health.

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Heidi Zimmer	Alaska Community Action on Toxics	Wishbone Hill Mine Draft Health Impact Assessment	4.0 Baseline Conditions	4.5.6 Surface Water Field Measurements and Potential Issues	65		Potential surface water contamination is not adequately addressed and the risk to human health is underestimated. The information on the interactions of surface and groundwater is contradictory and incomplete. As in the groundwater section, these key findings are based mostly on data collected more than 20 years ago using detection limits higher than drinking water standards. Restoration work on Moose Creek may have affected surface water quality and flow patterns. The lack of recent water quality testing using appropriate methods should be identified as a data gap here also. Water quality degradation in this case implies an increase in potential toxic contaminants (heavy metals, sulfur, ammonia from the blasting, and solvents/petroleum compounds from equipment operation), so the "potential issues" discussion should refer to possible effects on human health.

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Heidi Zimmer	Alaska Community Action on Toxics	Wishbone Hill Mine Draft Health Impact Assessment	5.0 Exposure and Toxicity Assessment	5.2.5.3 Exposure to COPCs in Groundwater	92		<p>According to Usibelli's permit application, run off water from the mine site will infiltrate the groundwater. If the "recharge to the groundwater aquifer is from local precipitation", then this implies that local precipitation will fall on the open strip mine, equipment, and coal stockpiles, and the water will penetrate to the aquifer, carrying with it any contaminants dissolved or suspended along the way. This appears to be a complete exposure pathway, and agrees with section 4.5.4 that "some degradation of the groundwater could occur".</p> <p>"The SCMPA indicates that the potentially affected aquifer is not currently used as a potable water source". This statement is unsubstantiated by the incomplete hydrology information, and there is no clear evidence presented in the SCMPA to show a complete separation between the aquifer(s) used for drinking water wells and the aquifer(s) potentially infiltrated by mine run-off. The logical conclusion from the hydrology information available indicates that run-off from the mine, the coal washing facility, and the slurry and sediment ponds is likely to contaminate drinking water sources in the area. This section of the HIA should be revised to reflect this conclusion and recommend significant changes to Usibelli's Operation and Reclamation Plan that will protect clean drinking water.</p>
Heidi Zimmer	Alaska Community Action on Toxics	Wishbone Hill Mine Draft Health Impact Assessment	5.0 Exposure and Toxicity Assessment	5.2.5.4 Exposure to COPCs in Surface Water	93	Figure 18	<p>As noted on pg 93, "runoff water will infiltrate to...glacial gravels, thereby providing a potentially complete pathway of COPCs to surface water via groundwater-to-surface water flow. In addition, PM could be deposited on surface water". In Figure 18, this should be designated a complete exposure pathway.</p>

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Heidi Zimmer	Alaska Community Action on Toxics	Wishbone Hill Mine Draft Health Impact Assessment	5.0 Exposure and Toxicity Assessment	5.3 Toxicity Assessment	93	Figure 18	<p>"as discussed in the preceding section, the only COPC that can be identified based on existing information is PM₁₀." Exposure pathways in Figure 18 are complete for general PM_{2.5}, and diesel exhaust through air flow to inhalation by residents. The exposure pathway from pits/storage piles/sediment/slurry ponds through groundwater and surface water to ingestion by residents and recreationalists are or should be complete. Section 5.2.2 cites the EPA's list of top ten chemicals released by U.S. surface mining. Based on this list and Usibelli's data in the same section, barium, manganese, ammonia, zinc, lead copper, chromium, nickel, arsenic, iron and sulfate should all be considered COPCs for a coal mining operation. Other toxic compounds from the flocculent used in the slurry pond and the leaks from heavy machinery used on site are COPCs as well.</p>

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Heidi Zimmer	Alaska Community Action on Toxics	Wishbone Hill Mine Draft Health Impact Assessment	5.0 Exposure and Toxicity Assessment	5.3.2 Health Effects of Particulate Matter 5.3.3 Diesel Exhaust Exposure	97-107		<p>Section 5.3.2 provides a literature review of the health problems associated with particulate matter, but simply concludes that the National Ambient Air Quality Standards "provide and adequate margin of safety for both general populations and sensitive subgroups". Section 5.3.3 takes a similar approach to consider diesel exhaust. Recent studies have shown decreased lung function, lung inflammation, and increased cardiovascular disease risk in humans from exposure to concentrations of fine particulate matter that were below the National Ambient Air Quality Standards. Assuming that regulations on air pollution are fully protective of human health has proved to be a dangerous fallacy as research shows more harm at doses previously thought to be safe. These sections should include the following reports in the literature review, as they elucidate the health risks of air pollution much more thoroughly.</p> <p>Whatcom Docs. Position Statement on Coal Shipments to Cherry Point. Unpublished literature review. Available at http://www.coaltrainfacts.org/whatcom-docs-position-statement-and-appendices</p> <p>Physicians for Social Responsibility (PSR). 2009, November. Coal's Assault on Human Health. Available: http://www.psr.org/resources/coals-assault-on-human-health.html.</p>

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Heidi Zimmer	Alaska Community Action on Toxics	Wishbone Hill Mine Draft Health Impact Assessment	5.0 Exposure and Toxicity Assessment	5.3.4.1 Studies Conducted in Appalachia	107-110		The question of whether proximity to coal mining is associated with increased health problems is a relevant question. This HIA's authors claim that similar associations do not exist outside of Appalachia, based on the uncertainties in Hendryx's research. There is no research or logical argument cited to back up this claim, and plenty of evidence to the contrary. A recent literature review by David Holzman in the journal Environmental Health Perspectives describes this evidence and should be included and considered in the final version of this HIA. The precautionary principle appears quite relevant here; if there is reliable evidence for an association between coal mining and harm to human health, then we do not need to absolutely prove cause and effect before taking measures to reduce the harm. Holzman, David C. Mountaintop Removal Mining, Digging into community health concerns. Environmental Health Perspectives. 2011. 19(11): A476-A483.
Heidi Zimmer	Alaska Community Action on Toxics	Wishbone Hill Mine Draft Health Impact Assessment	5.0 Exposure and Toxicity Assessment	5.3.4.4 Characterization of Particulate Matter Collected Near Surface Coal Mines	112		This section ignores or glosses over the evidence that particulate matter from any source causes harm. Even if coal dust had no more toxicity than any other particulate matter, coal mining and transport would increase the amount of dust that people downwind of the mine and the transportation route would be exposed to, and we could expect to see a related increase in negative health effects from this exposure. See citations above.

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Heidi Zimmer	Alaska Community Action on Toxics	Wishbone Hill Mine Draft Health Impact Assessment	6.0 Data Gaps	6.0 Data Gaps	113-114	Table 34	<p>Add the following data gaps identified in each HEC:</p> <p>HEC 1: Potential job losses in the service and construction sectors due to outmigration of a substantial number of people who do not consider it safe or healthy to live near a coal mine were not considered. The limited time span of coal mining jobs created should be considered also; they will only be there for the 20-30 year life of the mine.</p> <p>HEC 2: There is no data on accident rates for specific roads. Accident and fatality rates are for all traffic; there is no consideration of the increased hazard to passenger vehicles posed by commercial coal trucks.</p> <p>HEC 3: There is little data on contaminants of concern in coal and/or overburden, and the likelihood of these contaminants leaching into drinking water. There are contradictory claims about hours of operation; if trucks run at night, then operations at the mine site will be 24/7.</p> <p>HEC 6: There is a large body of evidence indicating elevated rates of many chronic diseases associated with coal mining. This literature was either not reviewed or dismissed inappropriately.</p> <p>HEC 7: The aquifers are not adequately mapped and the surface and groundwater modeling is insufficient. The data on water wells in the area is from 1991 and there are many more wells now that should be recorded.</p>

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Heidi Zimmer	Alaska Community Action on Toxics	Wishbone Hill Mine Draft Health Impact Assessment	7.0 Prioritizing Health Effect Categories	7.2.1.2 Social Determinants of Health Data Gaps	115-117		"Data gaps do exist in this category, but they do not represent gaps that prevent decision makers from reaching a responsible conclusion". The lack of traditional knowledge and subsistence surveys is a crucial missing suite of information. It is irresponsible to claim that you can assess the magnitude of an impact without gathering the information to quantify that magnitude. This is the equivalent of a biologist refusing to do population counts on fish or caribou, because the biologist can set a reasonable hunting/fishing season and bag limit without knowing how many animals or fish are there. Both the data gap and potential impact for this HEC should be rated "high".
Heidi Zimmer	Alaska Community Action on Toxics	Wishbone Hill Mine Draft Health Impact Assessment	7.0 Prioritizing Health Effect Categories	7.2.1.3 Social Determinants of Health Actions	116		Why are only the "decision makers" informed of strategies to address community polarization and psychosocial distress? The community has a right to know when decisions are made about strategies--or any other decisions--that affect their health and well-being.
Heidi Zimmer	Alaska Community Action on Toxics	Wishbone Hill Mine Draft Health Impact Assessment	7.0 Prioritizing Health Effect Categories	7.2.1.3 Social Determinants of Health Potential Impacts	116		When considering the positive impacts of job opportunities, the HIA's authors should also consider inherent boom/bust cycle of resource extraction industries. Mining jobs created now will be gone in 30 years when the mine closes, leaving a future generation of Sutton residents jobless and in poverty. Jobs in tourism, farming, guiding and other sustainable sectors will likely decrease with the mine, and these jobs will still be gone when the miners are out of work.

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Heidi Zimmer	Alaska Community Action on Toxics	Wishbone Hill Mine Draft Health Impact Assessment	7.0 Prioritizing Health Effect Categories	7.2.1.3 Social Determinants of Health Potential Impacts	116		The potential impact of the social determinants of health HEC should be ranked high. The community is already torn apart by the racism and ugliness of the controversy over this mine. Dozens if not hundreds of people plan to move away from this area to escape the devastating social and health problems that inevitably accompany a strip mine of this size. This move is equivalent to a forced dislocation, which violates a basic right to live in a peaceful, clean environment.
Heidi Zimmer	Alaska Community Action on Toxics	Wishbone Hill Mine Draft Health Impact Assessment	7.0 Prioritizing Health Effect Categories	7.2.2.2 Accidents and Injuries Data Gaps	117		The transportation route to Port Mackenzie is not adequately assessed. The focus is all on the Glenn Highway, and the risk for driving coal trucks out Knik-Goose Bay Road was not fully characterized. See comment on 4.4.9.

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Heidi Zimmer	Alaska Community Action on Toxics	Wishbone Hill Mine Draft Health Impact Assessment	7.0 Prioritizing Health Effect Categories	7.2.2.3 Accidents and Injuries Potential Impact	117		The increased risk of injuries or fatalities from motor vehicle collisions with coal trucks is badly misrepresented. The average annual daily traffic for the coal transport route is compared with commercial vehicle fatality numbers for the whole state of Alaska; this is a meaningless ratio. Non-fatal accidents are not even mentioned, nor is the increased likelihood of serious injury or fatality in collisions involving a two-ton coal truck. Transporting coal at night may lessen the impact on the Ya Ne Dah Ah school, but will increase the traffic hazard by driving in the dark. Night time transport implies loading activities all night at the mine site, which will add to the noise, light and air pollution for those living near the mine. The "extremely small change ...in fatalities" is not only a meaningless number because of the convoluted calculation, but also downplays the reality that a fatality is a human being dying. The statement "effective strategies exist to mitigate potential impacts in this HEC" is absurd. What strategy exists to mitigate a death after a semi-truck collides with a car? This HEC should be ranked "high" for potential impact--death is about as high impact as it gets.
Heidi Zimmer	Alaska Community Action on Toxics	Wishbone Hill Mine Draft Health Impact Assessment	7.0 Prioritizing Health Effect Categories	7.2.2.3 Accidents and Injuries Potential Impact	117		The projected decrease in average commute times (resulting in lower accident rates) makes two large assumptions: 1) most Wishbone Hill mine jobs are filled by Sutton residents who currently work in Anchorage, and 2) those Anchorage jobs, when vacated by the Sutton residents, are filled by workers with a shorter commute than Sutton to Anchorage. If both of these assumptions are not met, there is no net reduction in commuting miles and accident risk.

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Heidi Zimmer	Alaska Community Action on Toxics	Wishbone Hill Mine Draft Health Impact Assessment	7.0 Prioritizing Health Effect Categories	7.2.3.3 Exposure to Potentially Hazardous Materials Potential Impact	119		Damage to houses from blasting should be included in the list of potential impacts. Broken windows in the winter could cause frozen pipes and could cause significant property damage, including rendering a house uninhabitable within hours. Usibelli representatives have stated publicly that the blasting will likely break windows, so even the mining company admits that this is a plausible scenario. Mitigation should include a requirement that Usibelli set up a fund for reimbursing local residents for all repair costs, lodging and food for residents displaced from their homes, and compensation for stress. Even with this mitigation, dozens of people living near the mine will still bear the burden of mental and physical health problems known to be caused by stress and anxiety.
Heidi Zimmer	Alaska Community Action on Toxics	Wishbone Hill Mine Draft Health Impact Assessment	7.0 Prioritizing Health Effect Categories	7.2.3.3 Exposure to Potentially Hazardous Materials Potential Impact	119		"water treatment and water management strategies exist that mitigate the most severe implications of contamination events" This is another absurd claim. The most severe implications of groundwater contamination are birth defects, developmental delays, and cancer. Once a child is born with a birth defect or lowered IQ from prenatal exposure to heavy metals, what mitigation strategy exists to heal this child? How do you assure a cancer patient with no health insurance that "mitigations strategies exist"? If these strategies exist, they should be described and recommended in this HIA. None of the recommended mitigations come close to meeting this standard.
Heidi Zimmer	Alaska Community Action on Toxics	Wishbone Hill Mine Draft Health Impact Assessment	7.0 Prioritizing Health Effect Categories	7.2.3.5 Exposure to Potentially Hazardous Materials Actions	119		"Industry standard mitigation strategies should be followed". This is a health impact assessment, not a Usibelli bank account impact assessment. This section should be revised to "mitigation strategies that are thoroughly protective of human health should be followed", and described in the final draft of this HIA.

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Heidi Zimmer	Alaska Community Action on Toxics	Wishbone Hill Mine Draft Health Impact Assessment	7.0 Prioritizing Health Effect Categories	7.2.4 Food, Nutrition and Subsistence Activity	119-120		Without Traditional Knowledge surveys or household-level nutritional surveys, it is NOT "reasonable to assume that true subsistence use is low" based only on ADF&G's designation of the game unit as non-subsistence. ADF&G made this designation based on an overlapping, but fundamentally different set of considerations, and also without conducting the TK or household surveys. As an example of one of these differences, the game unit in question covers a much larger area than the Wishbone Hill coal lease, and this area supports a larger number and variety of casual and recreational user groups. The only other subsistence data cited by the HIA, the Chickaloon survey, was done over 20 years ago, and included a small population that only partially overlapped with the traditional subsistence users of the Wishbone Hill area. The data gaps in this section are crucial; TK and household surveys should be completed for the relevant population, and this section should be reconsidered in light of the results.
Heidi Zimmer	Alaska Community Action on Toxics	Wishbone Hill Mine Draft Health Impact Assessment	7.0 Prioritizing Health Effect Categories	7.2.6.3 Water Sanitation Potential Impact	122-123		If the likelihood is "high", why is the impact rated only "medium"? The claim that the medium impact scenario is the most likely is unsubstantiated by data or logical discussion. The impact should be rated "high". Most of the issues in this section were discussed under the "Exposure to Potentially Hazardous Materials" category in other sections; a consistent organization should be followed throughout for clarity.

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Heidi Zimmer	Alaska Community Action on Toxics	Wishbone Hill Mine Draft Health Impact Assessment	7.0 Prioritizing Health Effect Categories	7.2.7 Non-Communicable Diseases Data Gaps	124		Filling these data gaps may not alter the ranking (although it seems irresponsible to claim that gaining information would have no effect; see comment on 7.2.1.2), but would provide a baseline. Without this baseline data, monitoring a change in this HEC if the mine is developed will be impossible. This data gap must be filled, and compiling existing data is fully within the scope of a rapid appraisal HIA, so this baseline data should be included in the final draft of this HIA.
Heidi Zimmer	Alaska Community Action on Toxics	Wishbone Hill Mine Draft Health Impact Assessment	7.0 Prioritizing Health Effect Categories	7.2.7 Non-Communicable Diseases Potential Impact	124		If the Wishbone Hill is too small a project to "create widespread population effects that would trigger significant changes in morbidity or mortality for the area", that does NOT mean that there will be no impact. According to the World Health Organization, health impact assessments consider the distribution of effects as well as the overall or average area-wide effect. In other words, a severe impact on a small community is significant, as well as population-scale effects. Again, the reality of a small "change to chronic disease mortality or morbidity" is human suffering and death. Most of us consider this more important than Usibelli's profit margin.
Heidi Zimmer	Alaska Community Action on Toxics	Wishbone Hill Mine Draft Health Impact Assessment	7.0 Prioritizing Health Effect Categories	7.3 Overall prioritization of Health Effect Categories	125-127	Table 37	Of the eight Health Effect Categories listed, six are ranked "High" for stakeholder concern, and seven are ranked either "High" or "Medium" for the potential impact of that health effect, and for the likelihood that the health effect will happen. This indicates that we have substantial information that coal mining at Wishbone Hill will damage the health of the community. This mine should not be permitted without significant changes to the operations plan that will prevent these negative health effects.

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Heidi Zimmer	Alaska Community Action on Toxics	Wishbone Hill Mine Draft Health Impact Assessment	8.0 Mitigation	8.2 Mitigation Recommendations	127-131		The recommendations for every HEC are completely inadequate. They include closing some, but not all of the important data gaps. The recommended mitigations do not actually mitigate damage to human health, but will only record (monitor) the effects.
Heidi Zimmer	Alaska Community Action on Toxics	Wishbone Hill Mine Draft Health Impact Assessment	8.0 Mitigation	8.2.1 Social Determinants of Health	127		"many of the fears, concerns, and projected future impacts appear to be rooted in an incomplete understanding of the...technical/engineering aspects of the proposed project...the permitting and regulatory system...and a strongly held predisposition for or against coal mining." This statement is false; many of the stakeholders who were consulted during the process and are now commenting upon the draft HIA are experts in hydrology, law, biology and medicine. Most of the consistent opponents of the coal mine arrived at their position based on research into (and in some cases, personal experience with) the documented effects of coal mining across the world. This statement is also condescending and just plain insulting to every one of the informed, educated citizens who have contributed vast quantities of time and energy to assist and review a development project that holds little promise of benefiting them.