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Manh Choh ore extraction site DNR/DEC permit comment manh.choh.comments@Alaska.gov

Dear Ashlee Adobo, Large Project Coordinator, and to all of Whom it may concern:

The following comments are for both Draft Waste Management Permit 2023DB0001 and Draft Reclamation Plan Approval F20232626RPA

As a resident and property owner of the Fairbanks Northstar Borough, I have spent many days of the last 6 months, since being informed by AKDOT and Fort Knox's Jeremy Brans (he was moved by Kinross after the meeting to another job in Ontario), that trucks were coming through all your towns soon! After several important questions were asked by community members but never addressed, it was apparent to all in attendance we were being informed as to what is going to happen rather than what the majority of us expected: TO HAVE our comments and concerns

ADDRESSED. Sitting behind me, the mic went to a woman who introduced herself as Tammie Wilson WHO preceded to dress us all down because we weren't showing enough gratitude and respect "THAT WAS due" to Kinross Fort Knox. Wow first time in my life I felt like a plebe to the emperor that I've decided since is wearing no clothes, no plan that addresses valid environmental and human safety concerns. The DNR/DEC are now offering a way too short period of time to comment as if this is not incredibly complicated stuff best addressed THROUGH A FULL EIS. Since I know now Tammie Wilson is a Borough Assembly Woman, perhaps she has confused the taxes paid by Fort Knox leasing some property from the Mental Health Trust Authority with the taxes I pay as a property owner downhill from the mine. Assembly woman Wilson speaking to those of us in the Civic Center at Pioneer Park said we all owe it to Fort Knox to politely accept the meal plan served to Interior Alaskans at the gathering. Mining Corporate has a different plan for community engagement: telling us what they will do but not showing us a plan because they are not taking the time to make and communicate a plan that they clearly don't have. Mining Corporate is not taking on and has publicly answered that Black Gold Trucking has the contract for any responsibility which includes liability regarding ore hauling. Did a commercial insurance company and broker know the toxicity of ore the company Black Gold will be carrying? Do they know how much they will be liable for should a trailer spill and it becomes a waste disaster site? Were the contents of the haul disclosed? Who's hauling the explosives for the mining in Tetlin? Good questions but no one seems to be responding. So when a highway accident or spill takes place, ask yourself: Who is liable? Fort Knox and company have their reply worked out and delivered "Not It." I am asking the State of Alaska, the Governor and the public servants responsible for permits and plans and public comments to give us a little time (a minimum of a decade to sort) to come to our senses and get our heads and hearts around what seems already staked out gold-wise but not safety-wise re: transportation of toxic ore in untested truck/trailers, milling at a site 100s of miles away up the hill from my house where anthropocenic mountains are growing. I figure planning, permitting, mining, blasting, production, transportation and reclamation at two major mine sites are first steps. The State of Alaska and Governor are overly optimistic and have invested millions of dollars prematurely in my opinion and I can only guess that they swallowed the hyped up investment brochure rather than considering the complexity of grave endangerment to environment, private property, state and federal transportations systems, public highways and roads, wildlife and

lives of those on the road to include school children and paratroopers in buses. I was born and raised in Fairbanks and was away in Taiwan for 15 years when we chose to move back to Fairbanks to be closer to family, drive in low density traffic, live in a small spread out population, have access to wilderness and walk out of our door onto dirt again. The noise levels on Birch Hill, where I grew up, have increased to a river of noise from the Steese Highway and after Taipei we thought moving up another rise out of town might prove quieter. It has—so far. My dad's dad came into the country by way of a Montenegrin cousin in the early 1900s and by way of gold rushing. Old John Hajdukovich (not my dad by the same name) walked the woods, trails, rivers and waterways, hills and mountains that include Tanacross, Tetlin, Healy Lake, Tok and Delta, Deltana and more but I need to catch up on family history in this area of the Interior and thanks to community members who are knowledgeable, informative, and concerned I am finding my voice and values for increasing not decreasing my lifespan. Lifespanning is best without toxins spread by what is indicated in both the waste management permit and reclamations plans as well as what is negligently missing. No plan is a bad plan. I remember my dad telling us kids that old John on his death bed was whispering about the motherlode out there somewhere. My dad could not make sense of any details specific to a location, and now, as I think about it, I wonder if Manh Choh and the whole 250 mile corridor of the proposed ore haul is just the tip of the turquoise lakes found at open pit mine sites that are engineered to be maintained forever unless the walls break loose from an earthquake or extreme climate events. The canary in the golden state of California is enough for me to listen to the National Weather Service team, Rick Thoman et al, that has repeatedly warned that the Interior of Alaska has been and will continue to see increased precipitation due to climate change. Frequent, heavy rainstorms may change the hydrology and cause increased runoff or flooding events in the area of the mines along the proposed ore haul corridor. The industrial use of our public highways and roads in the Fort Knox/Peak Gold/Contango/Manh Choh 300 mile radius for potential production and transportation of ores spans damn near half the State. At this point I oppose open pit mining and specifically the egregious ore haul proposal to transport high acid ore from Tetlin to Cleary to process in my back yard, which for the Interior is now everyone's front and back yard. Old uncle John couldn't be specific about the magnitude because the orders of magnitude were beyond him. He lived a life of meager means, died poor in the pocket but wealthy beyond gold given a long life out on the land and beyond world wars and Tito's rule in then Yugoslavia. Tito is now remembered as a typical communist fascist. And it now appears that the current state administration is joining ranks of large scale international global corporate fascism operating behind a facade of representative democracy. A Gilmore Trail neighbor who is one of Alaska's highest time heavy equipment operators/mechanics who grew up mining with his dad recommended a book *How the World Really Works: The Science Behind How We Got Here and Where We're Going* by Vaclav Smil to help me understand the numbers and the scale of complexity involved. THE ORDERS OF MAGNITUDE are so large between my reference to family member old John above and this comment responding to the State of Alaska's DNR/DEC department permits and plans for this large scale open pit project. For basics, I have learned this type of mining 'is "considered one of the most dangerous sectors in the industrial world...causes significant effects to miners' health, as well as damage to the ecological land...causes changes to vegetation, soil, and bedrock, which ultimately contributes to changes in surface hydrology, groundwater levels, and flow paths...Additionally produces harmful pollutants depending on the type of mineral being mined, and the type of mining process being used.'" (Wikipedia if you too need to get the picture). This kind of mining is not possible without enormous infrastructure. The salesman for the Contango investment, mining exec Rick Van Nieuwenhuyse, says all they have to do is build a driveway to the highways: "The Peak deposit just needs a driveway!" (North of 60, Mining News by Shane Lasley) When Jeff Benowitz, a geologist, who by the way is not paid to

spend three days out of his life to send you technical comments on production and transportation, fiscal ethics, transportation and processing, the difference between granitic ore on Cleary Summit and skarn ore down at Manh Choh being highly dangerous levels of acid (but you know this from what EPA was paid to inform you of the obvious), it looks to me like the State of Alaska and the governor have neglected to take responsibility, liability and gut level dignified communication over the dire matters at hand. What is your gut telling you? No wonder I can imagine town meetings in the future to fight for the obvious, safety first, clean air, water and food security for starters.

Vaclav Smil's Appendix: Understanding Numbers Yet another way to illustrate the unprecedented range of magnitudes that enables the functioning of modern societies is to compare them with the range of traditional experiences. Two key examples will suffice. In preindustrial societies, the extremes of travel speeds on land differed only by a factor of two, from slow walking (4km/hour to horse-drawn [sleds on what became Richardson and Alcan Highway] for those who could pay for a seat (often un-upholstered). In contrast, travel speeds now range over two orders of magnitude, from 4km/hour for slow walking to 900 km/hour for jetliners. And the most powerful prime mover (an organism or machine delivering kinetic energy) an individual could commonly control during the preindustrial era was a powerful horse at 750 watts. Now hundreds of millions of people drive vehicles whose power ranges between 100 and 300 kilowatts—up to 400 times the power of a strong horse—and the pilot of a wide-body jetliner commands about 100 megawatts (equivalent to more than 130,000 strong horses) in cruising mode. These gains have been too large to be grasped directly or intuitively: understanding the modern world needs a careful attention to orders of magnitude! (Smil, pp. 232-233) Modern Alaska needs a careful attention to the orders of magnitude involved with large scale industrial globalized mining and the insane ore haul proposal. The trail to town, from upper Tanana River region locations to Fairbanks went from a trail to road, from horse power (yes horses) to first autos to what is proposed 737s rolling down the Rich through towns and neighborhoods near you in less that 100 years, i.e. in my parents lifetime. The Richardson was a dirt road to pavement in my lifetime. In my parents' parents' lifetimes the bridges the State recently mentioned needing replacement were built and allowed families to drive North to Alaska not too long ago. My parents' aged peers are able to grasp the enormity of what is staked out in the permits and plans and what is currently and negligently absent. Since my 2012 arrival as a property owner atop Mt. Lulu Fairbanks, a mountain has been made by mining at Fort Knox at the hands of humans in machines. Cyborgs by definition. I can walk 100 steps out our door to take snap photographs of the sublime spectacle of stepping monoliths descending down towards the Chena River valley. You can now see the honkin' anthropocenic mountain off in the distance from around Eielson Airforce Base on the way to Fairbanks. Fort Knox Mine up on Cleary Summit is a mind bogglingly anthropocentric, i.e. human-centered and furthermore includes an ethical belief that humans alone possess intrinsic value especially with gold in our pockets. Since the mineral, and pointedly the gold could care less what we do, I figure it is time to at least let myself wonder about what is going on up there. Photojournaling the project is worthy of Ed Burtynsky's Hasselblad and drone to capture large scale anthropocenic aerial photography for museums around the world. On different days of the year I walk out on my deck and shoot photos of a ribbon of fugitive dust from Fort Knox that roils down the Steele Creek valley and lightly showers Whoville downstream. That's all of us Whovillers in Fairbanks. It's a pretty shot when the sunset is throwing pink and the green brown laden olive puke green yellow ribbon flows with von Karman Street vortex lines. From my house, I can ski about 8 miles to the base of the heap. One time I skied up on Cleary Summit on a day when PM10 fugitive dust curlycued down through the Goldstream Valley. On a day a month ago I skied True North side of the Steese and discovered views of two other new anthropocenic mountains. All the while I began to question the silent fugitive dust streams and whether it was good for me to keep skiing and breathing deep the air on the domes nearby or even

Birch Hill for that matter given particulate matter increases in many sizes and flavors. The top nordic skiers in the US are competing up at Birch Hill this week as I write. I ask our State's officials to communicate in a dignified manner about what endangers all of us in Interior Alaska. We are maxed for air quality. Burning more energy sources, likely low sulphur diesel and naphtha from North Pole to run increased mine production of proposed transported ore will max out an already maxed out basin. We need the oil industry and natural gas to heat our homes. Transitions from fossil fuels is decades away and no one is able to forecast the realities that will make. I don't need a gold tooth anymore and I love the great outdoors so don't wear gold or silver much anymore either. Fugitive dust from the Fort Knox heaps is one type and non-tailpipe emissions from production sites/mines all the way to town from the planned Tetlin heap are another. An Ore hauling factor to consider is the non-tailpipe emissions/fugitive dust from Black Gold truck and trailer tires of which there are 52 tires per vehicle. Non-tailpipe emissions include the mineralizations that shed from brakes and tires as trucks roll and slow.. See 2023 research just published on non-tailpipe emissions below. Pretty ribbons of toxicity for all in this proposed package. Speaking of tires, the fact that Peak Gold LLC plans to use the Fort Knox rock dump to dispose of tires from both the Manh Choh extraction site and the Tetlin-Cleary summit transportation corridor trucks is more documentation that both the transportation corridor and the Fort Knox mine site needs to be part of the waste management/reclamation plan permit/approval review. I want to emphasize that only Kinross/Manh Choh/Black Gold Transport really know, and they don't know. They have changed their numbers over time. They tell DOT one thing. They tell city councils and Borough Assembly something else. It would be interesting to document the discrepancies/changes over time. A hard working journalist like Dermot Cole also had questions about it. Using the official sources and transcripts of recordings, I can imagine feeding him the differing numbers announced by Kinross to help out. (The official sources or transcripts or recordings would be best references.) I have heard from the beginning Kinross says 2-4 deliveries/hour. That means 2-4 northbound truck trips per hour and the same number southbound. If 2 deliveries/hour, then $2 \times 2 \times 24 = 96$ north and south bound transits per day. If 4 deliveries/hour, then $4 \times 2 \times 24 = 192$. In Delta, they said 2.5-3 deliveries/ hour didn't they? That would be $3 \times 2 \times 24 = 144$. This is another example of the orders of magnitude and the unprecedented nature of this global operative fiasco. If they ordered 60 trucks and plan to use 48 for 2 shifts/day, then that makes 48 round trips twice a day. ($48 \times 2 \times 2 = 192$). These have been averages only from the beginning. Will they haul more in summer than winter and stop during spring weight restrictions? But I have no idea because there is no public plan for this aspect of an unacceptable fantasy.. The real problem here is that the state hasn't exerted itself. If it forced Kinross to follow the regs, then we'd know how many trucks/trips the state would allow or limit in terms of the number it places on truck transit numbers. But as it is now, Kinross could double the number on the first day without any consequences. So we all are depending on Kinross to advise us of the number, and why would anyone trust them at this point? Kinross has estimated varying numbers, but basically said from the beginning 2-4 deliveries of ore (northbound) per hour on average. It could be more than that. Together with the southbound return trips, that's 96-192 truck transits per day. At the FNSB assembly I heard the Black Gold owner respond to an assemblyman's question: So it could be a lot more or a lot less? And the Black Gold guy said yes, confused about what he was allowed to say by corporate not in the room. Kinross sends only workers and community engagement folk to public meetings. I have never met a higher up. And these folks always say when the questions are substantive, I'll have to get back to my team for that. I am thinking out loud here and think the public needs more time to comment and needs the State to step up its responsibility and mitigations. THANK YOU FOR GIVING ME THE OPPORTUNITY TO COMMENT AND MANY OF US NEED MORE TIME TO COMMENT. I am requesting the DNR/DEC, given the EPA Region

10's letter dated February 11, 2022 to Gregory Mazer/U.S. Army Corps of Engineers, Alaska District on Fort Wainwright in Fairbanks, to acknowledge and understand that "there is a high level of public interest in this project due to the plan to transport mined ore to a separate location for processing and expects that decision processes related to this proposal may be controversial and believes this project would greatly benefit from a more thorough review of the facility's Plan of Operations, including construction and operation, and an ore transportation plan." Furthermore, "[The EPA's] "comments identified several potential significant direct, indirect, and cumulative impacts regarding the entire scope of the project that warrant detailed evaluation during the permit decision process." The EPA recommended that the Corps request additional information from the applicant regarding mine construction, operations, maintenance, and reclamation such as the Plan of Operations, Reclamation Plan, Transportation Plan, baseline water quality results, acid-base accounting, and other technical studies and reports. These large, detailed and time-consuming parcels of information are necessary to address concerns regarding potential significant degradation to WOTUS, such as the Tanana River, Tok River and Tetlin Lake, resulting from potential discharges of mine contact wastewater, which may transport elevated levels of mercury, arsenic, and other toxic pollutants [copper, silver, cadmium, cobalt, lead, silver and zinc] to these receiving waters. I need to bring this comment to a finish because it is due before 5pm. From a citizen. my gut tells me to finish off with where my research started on Wikipedia,"Gee, what is open pit mining?" I figure comments like mine may be read by others like me. I have read many already and feel some kinship with others around what is being dished up: "Open-pit gold mining is one of the highest potential mining threats on the environment as it affects the air and water chemistry. The exposed dust may be toxic or radioactive, making it a health concern for the workers and the surrounding communities. " "Open-pit mining involves the process of disrupting the ground, which leads to the creation of air pollutants. The main source of air pollutants comes from the transportation of minerals, but there are various other factors including drilling, blasting and the loading and unloading of overburden. [15] These types of pollutants cause significant damage to public health and safety in addition to damaging the air quality. The inhalation of these pollutants can cause issues to the lungs and ultimately increase mortality. [16] Furthermore, the pollutants affect flora and fauna in the areas surrounding open-pit mines." EPA, Amy Jensen, Regional Wetland Coordinator Letter to Gregory Mazer 2/11/22 to US Army Corps of Engineers, Fairbanks Field Office, Fort Wainwright, Alaska Letter to Gregory Mazer 8/19/22 to US Army Corps of Engineers, Fairbanks Field Office, Fort Wainwright, Alaska cc: Robert Hensley, US Fish and Wildlife Service and Louise Smith, US Fish and Wildlife Service Vaclav Smil How the World Really Works: The Science Behind How We Got Here and Where We're Going, 2022 Barb Schuhmann Re: Objection to Approval of Permit Applications Request for Public Hearing Request New Public Comment Period Reclamation Plan F20232626RPA Integrated Waste Management Permit 2023DB0001 for Manh Choh Project Barb Schuhmann Re:Objection to Approval of Permit Applications Reclamation Plan F20232626RPA Integrated Waste Permit 2023DB0001 for Manh Choh Project Barb Schuhmann Re: Objection to Approval of Permit Applications Request for Public Hearing Request for Corrected Public Notice and New Public Comment Period Reclamation Plan F20232626RPA Barb Schuhmann Re: Objection to Approval of Permit Applications Request for Public Hearing Request for Corrected Public Notice and New Public Comment Period Reclamation Plan F20232626RPA Integrated Waste Management Permit 2023DB0001 for Manh Choh Mining Operation Jeff apple Benowitz, Geologist, PhD Manh Choh ore extraction site DNR/DEC permit comment (manh.choh.comments@alaska.gov) *request to extend the Public Review and comment period 2023 Evidence of non-tailpipe emission contributions to PM2.5 and PM10 near southern California highways Particulate Matter concentrations near highways are influenced by vehicle tailpipe and non-tailpipe emissions, other emission sources, and urban

background aerosols. *Paper summarizes “Mineral dust was a major PM2.5 and PM 10 component, with enriched elements related to brake and tire wear... Two brands of tire particles show significantly different chemical composition, suggesting that different brands and types of tires need to be tested to establish tire wear particle source profiles... The source of such high phthalates found in the study should be investigated as DEHP is a probable human carcinogen.... The comprehensive PM2.5 and PM10 mass and chemical composition from this study provide insights into near-road particle sources and atmospheric transformations. These data will be useful for source attributions to assess potential health risks of exposed communities. Patrice Lee Citizens for Clean Air, Fairbanks, Alaska “The Borough State Chamber of Commerce, Power Sources, Utilities, etc. can’t say they support clean air while finding almost every option to do so is feasible. If Alaska wants to fund a project, they will find it ‘feasible’. If they don’t want to fund a project Alaska will find a way to declare it ‘infeasible’ or uneconomic. Meanwhile our obituaries are full of the 50-101 people who die prematurely each year from the effects of breathing dirty air. Property rights are fundamental to Alaskans. Personal property and our own bodies are up against a dirty air assault.” [I SUGGEST THE EXAMPLE OF, in my opinion, the EGREGIOUS ORE HAUL PROPOSAL COOKED UP BY FORT KNOX/PEAK GOLD/CONTANGO/MANH CHOH IN WHICH THE STATE HAS ALREADY INVESTED WITHOUT CONSIDERING SAFETY FIRST is a great example of “feasibility” only the calculations of risks and costs that endanger Interior Alaskans has not been put on a scale with one single ounce of gold from a unpermitted open pit mine ore haul sales pitch.] Shane Lasley Mining News North of 60 The Mining Newspaper for Alaska and Canada’s North 20 questions for Rick Van Nieuwenhuysen, Mining exec talks new role with Contango ORE, Alaska geology, community engagement, metals prices, Alaska’s mining future North of 60 Mining News—February 1, 2020 Sales lines include: “ The Peak deposit just needs a driveway!” RE: The Peak Manh Choh deposit “ A hydrous skarn is a little unusual, so it does have some unique characteristics—like most orebodies—but based on preliminary work, the gold metallurgy is excellent. The other uniqueness, and of course a huge advantage, is the proximity to infrastructure.” Hello Van Nieuwenhuysen means the State and Federal highway system for which costs or liabilities seem to be someone else’s like Black Gold Trucking, the State of Alaska and Federal Government. But he also means the mill on Cleary Summit. Rick reminds us several times in the 20 Questions to “REMEMBER—we already have a road!” Maybe he can get with Richard Branson and balloon it from mine to mill without road use. Don’t have the technology to safely pull it off Rick? Then maybe humans have to wait before they invent it. Rick also said it’s a plan that is holding the project up. That is because there is no plan and people like me have figured that out and are spending days of their life questioning and commenting on the no plan that is their plan. Fort Knox employees are sent to “community engagement” events but can’t answer questions about the plan because they don’t have one.*He is not showing up at any of the Fort Knox/Peak Gold/Contango/Manh Choh/“community engagement” performances where we are presented what is going down but the answers to the obvious questions regarding the safety of the ore haul are answered with “have to get back to the team about that.” This is a faceless, divisive and monopolistic characteristic of open pit mining projects.