



Yellowknives Dene First Nation
P.O. Box 2514, Yellowknife, NT
X1A 2P8

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Submitted To:
Mackenzie Valley Land and Water Board
7th Floor - 4922 48th Street
Yellowknife, NT
X1A 2P6

The Yellowknives Dene First Nation is pleased to provide this written intervention to the Mackenzie Valley Land and Water Board in regard to the Giant Mine Remediation Project (GMRP). The YKDFN has participated in many aspects of the GMRP to date and has shared its knowledge and registered its concerns to the Project and to the Board.

The YKDFN has participated in and supports the GMRP to the extent that its outcome can effectively mitigate the impacts of the Giant Mine and effectively manage its risks. We believe that in its current form the water licence process is not capable of accommodating YKDFN's rights. The process to remediate the Giant Mine and mitigate its effects has not accommodated YKDFN's Treaty and Aboriginal rights.

Although we participate in and support activities that seek to mitigate the risks posed by the Giant Mine, we view the water licence process as a small piece attempting to mitigate the long term damage Giant has caused.

1. YKDFN does not support a temporary solution to arsenic trioxide. The current freeze-in-place plan is not sufficient remediation nor do we consider it a permanent mitigation of the risks to our way of life. We expect the co-proponents to support diligently a technical solution to render the arsenic trioxide inert and expect the YKDFN will be included in the effort to identify this solution.

YKDFN supports the recommendation of Alternatives North for the establishment of an innovation prize in support of innovative solutions.

2. Although we support the overall goals of the Project, we do not support the issuance of a water licence in the absence of a community benefits agreement that addresses the accommodation of YKDFN rights and other interests.

3. There must be acknowledgement and acceptance of accountability in the form of compensation and an apology for the damage caused by the Giant Mine.
4. There must be a robust community-based monitoring initiative led by YKDFN included as a core component of the oversight and perpetual care of the Giant Mine.

Yellowknives Dene and the Giant Mine

The Giant Mine was built, operated, and abandoned within the heart of Yellowknives Dene's traditional territory. The sights, sounds, and smells of Giant Mine have never been far from our peoples' perceptions and minds, especially when they are at home in the communities of Ndilo and Dettah, or on the land that has been so deeply impacted by the Northwest Territory's mining history. Much of our modern history since the 1940s has been consumed by the Giant Mine, and the decisions related to its operation--and remediation.

The Giant Mine displaced our people from the heart of our territory. It contaminated our lands, waters, and the fish, animals, plants, and medicines that we rely upon. It destroyed the food security that we had ready-to-hand in Yellowknife Bay (Wiiliicheh), in the Yellowknife River (Wiiliideh), and in the country taken up by and surrounding the mine. Its poisoning was unknown to us for many years. All of this happened in spite of the promises that were made to us in Treaty 8, in violation of our many other Aboriginal rights, and our own Dene laws, which give shape to our responsibilities towards the fish, plants, and animals who share our territory, for whom we are bound to exercise the responsibilities of Dene stewardship.

Generations of Yellowknives Dene used and occupied the area represented today by the Giant Mine lease boundaries. The western shoreline of Yellowknife Bay and the mouth of Baker Creek was historically prized as an area for harvesting fish, birds, wildlife, and a wide variety of edible and medicinal plant species. Elders and archival records tell us that our people avoided settling within this preferred harvesting area in order to minimize disturbance to it, and instead settled across Yellowknife Bay along the eastern shore. Our Elders tell of traditional land use in and around the mine site during their lifetimes, even after mining began. Other members hold knowledge of traditional land use in the area received from ancestors and Elders in the community.

Elders indicate that the devastating impacts to traditional land use and culture as a result of the use and effective destruction of this important harvesting area were compounded by the trauma of discovering after the fact that traditional harvesting areas and drinking water sources that YKDFN members had continued to use after mining operations began had been contaminated by arsenic.

Our Elders view the mine's contamination of our fresh water sources, and the government's failure to communicate about the associated dangers, as both emblematic of our experience with the Giant Mine, and a source of ongoing grief and resentment.

The contamination of our drinking water sources by the mine led to the death of at least one child, and the memory of this incident has become foundational in our community's collective experience and understanding of the mine and its impacts. Although official records note the death of one child as a result of arsenic poisoning caused by drinking contaminated water (snow) in 1951, our members consistently refer to the death of two children at that time, and the general fear that rippled through the community when they learned that they had been bathing their children in arsenic contaminated water.

Elders report that these deaths triggered general avoidance and disuse of the rich harvesting and important cultural sites within and around the Giant Mine area that had sustained Yellowknives Dene for generations. The impact of these deaths was and remains broader than the loss of these two young lives and the associated grief; it encompasses the effects on traditional land use and culture caused by environmental impacts from the mine, as well as the social and psychological impacts caused by the mine and Canada's combined failure to protect or warn our people. Elders indicate that the impact of these deaths has been compounded by multiple subsequent deaths and illness within the community perceived to be the result of arsenic contamination.

Our Elders report that in addition to the community's shared knowledge of historical deaths due to arsenic poisoning, the ongoing concerns about arsenic toxicity and contamination are informed by knowledge and strong perceptions of health impacts suffered by our community members who worked at the mine.

Today we know that contamination from the mine has caused major ecological impacts to fish, wildlife and vegetation habitats affecting the occurrence and prevalence to the species preferred by us, which support our community's food security.

Our members who continued to exercise their rights within the mine lease and in Yellowknife Bay are perceived to have suffered exposure to mine-related toxic chemicals. As a result of impacts to the environment surrounding the mine and to human health, today community members must travel farther distance to practice our traditional fishing, hunting and gathering activities. The distances individuals travel to areas they considered unaffected by the mine or other mines varies, and a number of factors contribute to an individual's feeling of safety. For all, the impacts are felt in increased costs and time travel to access foods and medicine from places considered safe; for many people, over time, these barriers to exercising their rights have become too great an obstacle, and the inter-generational knowledge base required for maintaining our way of life as a hunting community is eroding.

Beyond the lease boundaries, our people avoid areas that they perceive to be contaminated. This avoidance represents a break with their traditions and an infringement of their rights. These perceptions occur and persist not in spite of science-based assessments but owing to the mistrust of government science and the management of the Giant legacy.

The Giant mine has had major impacts on our access to clean water, and financial hardship for our communities. That we have been required to pay for freshwater delivery services instead of drawing water from Yellowknife Bay and snowfall, as we did for thousands of years, is a constant reminder of Giant's legacy. Our constant struggle to prevent children swimming at the traditional recreational areas used by their ancestors is another.

The alterations in traditional use and practices in and around the Giant Mine site, and the loss of access to preferred traditional land and water use there—both as a result of the mine—will continue to have lasting impacts on the health and continuity of traditional our culture and lifestyle, and by extension the overall health and wellbeing of future Yellowknives Dene children.

Our Elders describe concerns and negative perceptions regarding both past and current mine-related activities, and generally indicate that these stem from their knowledge of inadequate consultation on mine activity and/or insufficient communication of environmental impacts and associated risks throughout the lifespan of the mine and since its closure. Our Elders trace these impacts back to the early days of the mine when they say no effort whatsoever was made to

inform or involve the YKDFN, effectively placing the community at risk by allowing us to continue to pursue traditional land use practices unaware of the potential health risks.

The collective memory of the mine's early impact on the environment and human health, and the government's failure to communicate about these impacts effectively enough to protect the community from harm, seeded mistrust and bitterness towards both parties that Elders articulate today.

1. Stress Study

The YKDFN is currently working with the Project to undertake a Stress Study, but there is currently no timeline on its completion.

Measure 10 of *Mackenzie Valley Environmental Impact Review Board Report of Environmental Assessment – Giant Mine Remediation Project* required the Project to commission a human health risk assessment, which would include “indirect effects of potential exposures to arsenic on wellness, including stress effects.”

The measure requires the Project to develop to “identify, design and implement appropriate design improvements and identify appropriate management responses to avoid or reduce the severity of any predicted unacceptable health risks.”

The YKDFN is deeply concerned with the lack of completion of the Stress Study. As such, the Board will not have access to the results of the Stress Study, and that the perspectives, conclusions, and outcomes of the study may not inform the licence.

YKDFN requests that the Board require the Project to complete the Stress Study in a timely manner to better inform future decisions.

YKDFN requests that the Board direct the Project to submit the results of the Stress Study, and to “identify, design and implement appropriate design improvements and identify appropriate management responses to avoid or reduce the severity of any predicted unacceptable health risks.” Moreover, funding to implement the measures identified in the Stress Study should be identified.

2. Baker Creek

The YKDFN requests the Board direct the Project to develop more expansive planning criteria for Baker Creek's remediation, which would see Baker Creek restored to its greatest and most productive potential.

The YKDFN requests that the Board direct the Project to establish these criteria in conjunction with a community-based aquatic water monitoring program co-developed and delivered by the YKDFN.

3. Quantitative Risk Assessment

The YKDFN believes that the QRA is an important instrument for identifying and mitigating Project-related risks.

The YKDFN requests the Board to direct the Project that upon completion, the Quantitative Risk Assessment is submitted to the Board and that it becomes a part of the water licence and forms a part of the Project's record.

4. Emergency Management Measures

The YKDFN recommends the Board require the Project to address the unique situation of Dettah in developing their Emergency Response Plan. Whereby we request that Dettah is taken into consideration of these plans.

The YKDFN is concerned that the only highway into and out of Dettah intersects the Giant Mine lease boundary. In the event of a catastrophic failure this could leave several hundred community members isolated from the rest of Yellowknife and any evacuation method.

5. Emergency Management Measures

The YKDFN requests that the Board require the Project to develop an efficient and functioning notification system to communicate unexpected conditions to YKDFN administration and to members.

6. Closure Planning

There is a lack of clarity and detail around closure planning. Since the first iteration of the CRP, this has not improved. We were surprised that during the second technical session on closure criteria fundamental details with respect to closure were not available for examination and consideration. This included effluent water quality parameters and detail in management plans. Our team heard that numerous water quality criteria, management plans and monitoring plans would eventually provide the details after the engineering is completed. It is unclear how the Board expects us to fully participate in the licensing process without this information. We reiterate some of our key concerns below.

Closure criteria must refer to measurable targets to be meaningful. Criteria and draft licence conditions have not been available for our review and consideration. In particular, we will strive to have requested changes to closure criteria correctly captured, effluent criteria set that are acceptable for ecosystem and our people's health, and acceptable monitoring criteria for risk-managed areas. We note that the Perpetual Care Plan has yet to be developed and that site wide criteria for long-term care have not been defined.

Details of core Project plans that will directly influence the Project outcomes have not been developed or shared. We were told management and monitoring plans have not yet been distributed for review as engineering designs are not complete to inform such plans. We emphasise the value and importance of the Board requiring under license that YKDFN is directly involved in the monitoring programs.

Based on our past experience with Giant Mine, we do not trust that the risks of Giant Mine are being managed so that our people and the air, land and water that we depend on are not put at risk.

We recommend to the Board to have YKDFN directly involved in the monitoring of Giant Mine; to begin to re-build trust and confidence with the Project.

The Implementation Plan, Construction Plans, and Perpetual Care Plans have not yet been developed. All of these plans will require, and benefit from, input from the YKDFN. We will review them with respect to our goals and objectives for the site and our meaningful participation in the Project. In particular, we would like to see the Implementation and Construction Plans describe opportunities for employment, contracting, and education for the YKDFN businesses and individuals.

During the development and finalisation of all these plans, YKDFN will continue to advocate for the incorporation of traditional knowledge gathered through either the environmental assessment process or from proposed engagement.

YKDFN does not support, or accept, this Project as a permanent solution to the risks related to arsenic trioxide stored underground at Giant Mine. We have concerns about perpetual water treatment and water treatment volumes should be reduced over time. This includes water being collected or exfiltrating through pits to groundwater. Furthermore, we note that the Reclamation Research Plan has yet to be developed so we do not have suitable information, or any confidence, in passive and semi-passive treatment technologies.

7. Fisheries Authorization

While typically done after licensing, the YKDFN supports initiating discussions with respect to a Fisheries Act Authorization for the Project earlier in the process.

Fish are important to us and the Giant Mine has affected our rights and ability to harvest them. We intend to be full participants in the Fisheries Act authorization process.

8. Explosives Management Plan

The past use of explosives at Giant Mine has created disturbance and impacts beyond the Project site.

We recommend to the Board that sensory impacts to our community and the environment should be considered and mitigated within the Explosives Management Plan.

9. Post-Remediation Design and Appearance

The YKDFN community members have expressed repeated concern about the aesthetics of the proposed post-remediated site and surrounding landscape.

The YKDFN requests that the Board direct the Project to conduct, as part of an updated CRP, extensive engagement and consultation on the physical design of the mine site.

10. Aquatic Effects Monitoring

Yellowknives Dene Elder and spokesperson, Fred Sangris, defines Traditional Knowledge as “the very first science”. It is practical, acquired through experience, and also passed down to each generation through the continued practice of land-based skills and environmental and cultural knowledge. This “good knowledge” includes techniques for a good lifestyle, not just survival. It underpins traditional systems of land management and protocols that remain embedded in Dene culture today. YKDFN recommend that this system of “taking care of the land” that is a part of existing monitoring practices in contemporary Yellowknives Dene culture, be integrated into aquatic effects monitoring program of the Giant Mine.

We recommend that, given the perpetual care aspect of monitoring at Giant and YKDFN’s interest in seeing some benefits from the mine’s legacy, the community take a lead role in developing aquatic monitoring. Delivery of the monitoring programs represents an opportunity for YKDFN to develop long-term training and employment opportunities for its members, exercise its environmental management rights, and realize some benefits from the Giant mine through procurement and contracting.

YKDFN requests that the Board require the Project to co-develop plans, with Yellowknives Dene, to enhance inconnu and trout populations in the Wiiliideh River as part of a long-term aquatic effects program. According to the traditional knowledge of the Yellowknives Elders, these two populations declined precipitously as a result of effects from the Giant Mine.

YKDFN should be included in the development and planning of the monitoring programs, as equal participants. The monitoring program should set a high bar for knowledge co-production and should strive to include YKDFN TK into all aspects of monitoring and follow-up program design, from indicator identification, data collection and analysis, to management triggers.

Monitoring in the context of perpetual care for a contaminated site such as Giant requires what has been described as “a new kind of economics” in order to create some benefit for YKDFN members and successfully integrate YKDFN knowledge. The monitoring program should be constructed to address some of the well-known social economic difficulties that mine remediation projects often encounter, including financial sustainability, and building trust relationships between mine management authorities and communities.

The program should invest in a high degree of training and capacity building for the YKDFN to become monitors, care for monitoring equipment, and participate in the analysis of monitoring results, and even develop communications about monitoring results. This will ensure its sustainability and continued relevancy to the community, and community engagement in its outcomes. YKDFN requests that the Board direct the Project to develop a long-term financial plan to account for the costs of such a monitoring program.

Closing

The YKDFN looks forward to intervening in the licensing process and expect that the Board will make available critical Project-related information, like proposed closure and water quality criteria and detailed draft plans, so that we have the opportunity to review and consider the information thoughtfully ahead of time.

We thank the Board for their involvement and are hopeful in their decision making in the coming months.

Mahsi Cho (Thank You)

A handwritten signature in black ink, appearing to read 'W. Lines', with a long, sweeping flourish extending to the right.

William Lines
Community Liaison and Technical Advisor
Department of Lands and Environment
Yellowknives Dene First Nation