

## 1. Resisting the Spectacle of Reclamation - Thinking Beyond Extractivisms

- **Remediation as ‘making better’, rendering mine closure a regulatory afterthought**

Dramatic images of post-extraction landscapes are fodder for critical conversations about extractivism, consumerism, capital accumulation, and waste and the ethical obligations humans have to limit, mediate and reverse such destructive forces. These conversations often come to head in the closure phases of extractive development, which have complex socio-economic and cultural impacts on local communities. Yet, the colonial and community care dimensions of post-industrial landscapes typically receive less attention than engineered containment solutions. In addition, regulatory mechanisms such as impact assessment and public reviews are often concentrated at the beginning of mineral development, with little space made for continuous public negotiation of relationships and toxicity in a dramatically changing landscapes.

The closure of extractive sites has historically been treated literally as an afterthought – the material process of pulling value from the ground is complete, and all that is left is to regrade some slopes, cap tailings ponds, maybe plant a bit of grass – ‘make things better’ - and then move on to the next extractive endeavor. In fact, mine closure and remediation, rather than offering an opportunity for healing from past extractive violence, often results in continued dispossession as the ‘value’ of remediation contracts are extracted and funneled elsewhere, and local communities are marginalized from deciding on future land uses.

If public reviews do occur for remediation processes (either for abandoned sites, or for operational sites as a part of licensing), they are almost always framed as “making better”. In impact assessment processes for new mines, remediation and reclamation plans are used as tools to prove the viability and sustainability of a project – things can be mitigated, things can be ‘put back’. In making such assumptions, remediation projects tend to, quite literally, cover and contain contamination in a way that obfuscates the perpetuation of toxic and colonial violences and avoids a discussion of what living with contamination might mean on a day-to-day basis.

In Canada, remediation plans are assessed at the beginning of the development, and renewed alongside water licenses. However, projects are rarely ‘re-assessed’ at closure - meaning that publics are rarely engaged in final remediation plans. In addition, in Canada, impact assessment and other environmental regulation represent colonial management impositions, restricting the scope of accountability in remediation projects.

- **‘Rendered Technical’: obscuring the socio-economic and cultural impacts of Remediation**

While planning processes for remediation increasingly employ the language of social rejuvenation, restoration and reconciliation, these terms are used within the confines of state-led, neoliberal spaces of Western science and industry, and are premised on ideals of historical fidelity and controlled improvement. In addition, the community effort that must go into reclaiming land, cultural practices, governance structures and more-than-human relations is not articulated in mainstream remediation or environmental assessment discourses (Hoover, 2017; Joly, 2017). Remediation expertise excludes community understandings of environmental violence, contamination and remediation:

Recently, this approach to extractive “closure” has been the subject of much debate and calls for improvement. Impact assessment regulation and water licensing in most jurisdictions now require remediation/reclamation plans to be submitted every 4-5 years and for financial securities to be committed. And yet, what it means to ‘close’ an extractive development and remediate/reclaim land remains an incredibly messy, conflictual process that has complex social, economic, and cultural impacts on local communities. These communities deal with an onslaught of change: intimately feeling the loss of well-paying jobs, perhaps celebrating the exit of unwelcome companies, losing infrastructure maintained by industry or experiencing dramatic fluctuations in demographics – all while dealing with the environmental and social legacies and injustices of a dramatically altered landscape.

For Indigenous communities in Canada, this experience of extractive closure is pronounced by the colonial intrusion and dispossession of territory that is often the premise for extractive development. Closure and remediation does not mean that land is given back – or that the lost land/relationship is compensated for. Human and more-than-human lives lost because of extractive colonialism are not accounted for in the ledger sheets of remediation projects.

- **Extractive Remediation: accumulation by perpetual dispossession**

Technical processes of remediation and reclamation are also incredibly precarious – these are complex sites that often require long-term maintenance, monitoring and water treatment, making ‘walk-away’ solutions nearly impossible and challenging the very notion of ‘closure.’ Typical remediation approaches downplay community concerns about living with perpetual environmental degradation and toxicity, relying on narratives of containment and control. In excluding local community knowledge and values, mine remediation activities threaten to reproduce historical injustices, environmental violence and colonial relationships associated with the original development.

In addition, remediation/reclamation projects themselves are extractive even after ore stops moving from the site. Large remediation/reclamation projects are ‘worth’ millions of dollars in contracts – the two largest in Northern Canada are approaching a billion dollars in projected spending. In almost all cases, the majority of the benefits from these contracts ‘fly south’, or in other words, do not land in the pockets of the locals most impacted by both past mining development and the success or failure of future reclamation. Accumulation by dispossession perpetuates itself as the wastes of past mining projects become contracting commodities.

- **Caring and taking accountability for extractive pasts/presents**

Using the specific example of the Faro Remediation Project, on Ross River Kaska Dena territory in Yukon, Canada, this paper presentation begins to flesh out how extractivism (specifically settler colonial extractivism) does not end when a mine closes. In this paper, I focus specifically on how reclamation and long term care of contamination land is framed within the bureaucracy of the Faro Remediation Project Impact Assessment and how resistance to this framing offers alternative imaginings of a future beyond extractive forms of remediation, recognizing that extractive legacies will be with us long into the future. Such a reformulation of remediation forces scientists, regulatory authorities, and colonial governments to confront the question of generational accountability for extractive violences and the material injustices of mine wastes. At the same time, scholars such as Eve Tuck, Sarah Hunt, Sarah De Leeuw and Dana Powell emphasize the need to avoid (and go beyond) a focus on ruin, loss and damage. In this sense, reclamation as a perpetual care practice focuses attention on the process of healing rather than on the damage.

## **2. Community-based, anti-colonial approaches to remediation research**

I am working for Ross River Dena Council (and their environmental consultancy company, Dena Cho) to support their environmental assessment and gather pertinent information regarding Ross River's story of the Faro Mine. For this work, I attend bi-weekly technical review committee meetings, review documents for the environmental assessment, participate in the evaluation of these documents, organize Elders Committee workshops to help set objectives for Faro work, and provide research and writing support to Ross River Dena Council and Dena Cho. I have also been completing interviews with community members that help direct the evaluation and review of Remediation documents. This work was then directed towards interviews with remediation scientists, advisors, regulators etc., in a 'study-up' approach that is based in participatory action research, political ecology and anti-colonial approaches. These research methods are directed at supporting community research needs, while focusing critique and analysis on the systems of power that constrain, direct, and erase community concerns.

As several research participants and interviewees have noted – mines are very visible, tangible 'agents' or symbols of state colonialism, environmental racism and environmental violence.

Mine closures and remediation "opens up" these contested, degraded places, and in the 'every day' discussion about what these sites mean for local communities, broader gestures to self-determination, justice, compensation and the hope for better, future land relations are continually made.

## **3. The Cyprus Anvil Mine**

The lead-zinc Cyprus Anvil Mine began operations in 1969 and produced ore (and waste) intermittently until 1999, when the owner of the day went bankrupt. When the Cyprus Anvil mine was constructed it received enormous amounts of financial, regulatory and infrastructural

supports from the Canadian and Yukon governments, including the construction of a town to service the needs of the mine. The Canadian government continues to pay a high cost for the development of this mine, as they are now liable for it as an abandoned site.

Throughout its lifetime the Cyprus Anvil Mine produced over 70 millions tones of acid-generating tailings, and 320 million tones of acidic waste rock, in addition to hydrocarbon contamination, metal leaching and general habitat fragmentation. Several times over the decades of ore extraction, waste containment infrastructures leaked and ruptured, resulting in significant discharges of various types of contamination outside the lease boundaries of the mine site. Labour relations also ruptured numerous times, resulting in prolonged strikes, court battles and temporary mine closures. Despite these controversies, the Cyprus Anvil Mine maintained a tight hold over the settler cultural identity of Yukoners – the Cyprus Anvil Mine was constantly framed by media and government as the central pivot of the Yukon wage and extractive economy, bringing southern colonial ideals of money, expertise, modern infrastructure and progress to the North.

The voice of Ross River Dena peoples' rarely appeared in these media and government narratives of the centrality of the Cyprus Anvil Mine to Yukon life. Both the Cyprus Anvil Mine, and the Faro townsite are located on unceded Ross River Kaska Dena territory, in the K'asba zela' region of that territory. The mine site itself is located specifically in the Tse Zul mountain valley. The mine and townsite were illegally developed on unceded territory (Foster, 2017; Supreme Court of Yukon, 2017). The ongoing court cases in response to the development of Faro and the failure of the Canadian government to negotiate a self-governance agreement have framed Ross River's relationship with the mine site and their ongoing resistance to extinguishing their Land and Indigenous rights. In connection to this resistance, the Ross River Dena Council has not signed the Yukon Umbrella Framework – a legal document that structure the process for land claims, self-governance and impact assessment in the Yukon. As the Faro Remediation Project is now in the midst of a Yukon Environmental and Socio-Economic Assessment Board (YESAB) review, a process they have not consented to is now being used to evaluate the impacts of the remediation project itself.

In the fall of 2019, the Canadian government submitted a proposal for the Faro Remediation Project to the YESAB. In this paper presentation, I use this Proposal as a window into how toxic legacies and remediation are framed and constrained through such regulatory processes and how Ross River community members (and this collaborative research) are actively disrupting these constraints.

#### **4. The Faro Remediation Project – 'Keeping Clean Water Clean'**

'Keeping Clean Water Clean' is the deceptively simple motto for the Faro Remediation Project, which in practice is called a 'perpetual care project'. Even with remediation and reclamation efforts, it will require water treatment and ongoing monitoring and maintenance in perpetuity. In its simplest form, the 'Keep Clean Water Clean' proposal for the Faro Remediation Project consists of three major actions: water collection, water treatment, and the covering and land-forming of tailings ponds and waste rock piles.

The water collection and treatment processes consist of a series of ponds (pit ponds and tailings ponds), piping, pumps, creek diversions and seepage collection systems. Whatever clean water can't be 'diverted' around the contaminated areas of the site (using engineered creeks), is collected – either through surface water pumping or through groundwater seepage collection. There are always leaks. Such leaks are predicted to change and potentially increase with time, as oxygen and water interact with the sulphide rock and tailings, producing acid and changing the pH of the water, which, in turn, precipitates other metals from rock... creating a 'plume' of contaminant that slowly moves down the valley, following surface and groundwater flows. This is the reason for the covers, which will limit the exposure of acid-producing sulphide tailings and rock to oxygen and water, hopefully slowing or stalling the acidification process and decreasing the amount of contaminated water that needs to be treated.

Once dirty water is collected, it is pumped to the 'Faro Pit' (once the largest mine pit in the world) where it is stored until treatment. The treatment sludge (the materials left over after water treatment) will be transported back to the pit, where it will become sediment, slowly building up over time, as contaminated water is stored on top, waiting to be treated, while also sealing in the by-products of that treatment within a watery barrier.

The term 'Faro Factor' is used (by the Project team) to attempt to reckon with a landscape and set of relations that is overwhelmed in a complexity of leakages, unpredictable changes in water quality, swings in pH, a contaminant plume of unknown movement, waste rock piles hiding 'hot spots' in their cores... not to mention power outages, pump failures and politics. And yet, the basics of the remediation plan remains deceptively simple – cover the waste to limit water and oxygen access, keep clean water clean, collect all dirty water, treat it and 'put it back into the environment'. Done. According to the Faro Remediation Project Proposal, this containment and water treatment work will result in local economic benefits, the possibility of future land use, and even the restoration (as close as possible) of a pre-mining landscape. Since the remediation project will make things better, it is argued that there is no chance of significant harm.

## **5. The Faro Curse**

However, the so-called 'Faro Factor' is representative of another type of post-extraction relationship. A relationship that has a much longer history than the Remediation Project would like to confront or admit.

According to Ross River Dena Elders, Faro has been cursed since Al Kulan, the white settler who staked a claim in the Faro area in the 1950s deceived the Ross River Kaska families who had housed him, and the young Ross River men who had also been his assistant prospectors (Grady Sterriah's family's story). The arches of this curse include the untimely (and dramatic) deaths of the three men involved in the 'discovery' and development of the Cyprus Anvil mine, the many leaks and strikes, and today, the ongoing inability of the Project to 'move forward'. The curse reflects a history dispossession associated with the Cyprus Anvil Mine, in addition to a long resistance to this extractive colonialism.

The Ross River Dena Council has documented the Faro curse, and the many impacts the Cyprus Anvil Mine has had on their community in a document entitled: *Just Like People Get Lost: A*

*Retrospective Assessment of the Impacts of the Faro Mining Development on the Ross River Indian People* (RRDC and Weinstein, 1992):

*“The environmental chaos from the excavation of the open-pit mine, the dumping of over-burden and the deposition of tailings on land steeped in family and cultural history has also resulted in deep emotions from a sense of dispossession”* (p. 119).

In the documentation of these impacts, Ross River Dena Council also emphasizes their continued presence, their resistance and their relationship to that land, despite and in recognition of, contamination:

*The visits represent informal community monitoring – keeping an eye on the changes with the intention of reclaiming it when the conditions required for serious land use recover.”* (p. 157).

## **6. Living with toxic legacies**

For this presentation, I want to focus on how the Faro Remediation Project Proposal frames ‘legacies’ for the YESAB process. The notion of legacy is carefully divided into two forms: 1) there are the legacies of environmental contamination – the metals, the potential for acid-rock drainage, the dangerous water quality; 2) and then there are the ‘historical legacies’ that provide the cultural and political context of the site, but are explicitly defined as ‘out of scope’ for remediation. They separate material toxicity from its relationships, proposing to construct a network of diversion channels, pipes, pumps, covers and water treatment as a set of improvement tools, rather than a perpetual care process that refuses to conform to linear notions of temporality and betterment:

*“Residual adverse effects caused by previous mining activity at the Faro Mine Site provide important context for assessing the effects of the Project and are discussed within component sections, where appropriate; however, they are not part of the Project but contribute to existing conditions.”* (RR1-33, CIRNAC’s Response to Ross River Dena Council’s Review of the Faro Remediation Project, 2021)

The YESAB process is still unfolding, and so there are opportunities for a change in this scope, as evidenced in the most recent draft Preliminary Scope of Assessment document written by the Board:

*“These legacy issues are likely to interact with project activities that may results in potential adverse effects to a number of VESECs [valued components]. First Nation comment submissions have emphasized the importance of considering legacy issues in the effects assessment.”*  
(YESAB, Preliminary Scope of Assessment, June 2021).

Ross River Dena Council, and the two other First Nations involved in the Faro Remediation Project impact assessment, have repeatedly (over decades) made clear the relationship between

past contamination, colonial extraction and ongoing dispossession of territory and power. The choice to not include such ‘residual adverse effects’ as a part of the Project, but rather as context, is a carefully crafted narrative that acknowledges that history while refusing to rectify it, hiding behind a veil of environmental improvement.

While the most recent document from YESAB shows a potential bit of wiggle room to adjust how reclamation at Faro will be defined, it is not the only place to negotiate the long term healing and care of Kaska Dena lands.

## **7. Creative ways of experimenting with, rejecting and reframing remediation:**

As several research participants and interviewees have noted – mines are very visible, tangible ‘agents’ or symbols of state colonialism, environmental racism and environmental violence. Mine closures and remediation “opens up” these contested, degraded places, and in the ‘every day’ discussion about what these sites mean for local communities, broader gestures towards self-determination, justice, compensation and healing are continually made.

Part of this research has been focused on identifying opportunities to engage in and re-define what the ‘good’ of remediation might mean for Ross River community members specifically. On the ground, this includes making strategic arguments to expand (and blur) the scope of remediation to include discussions on the impacts of the town of Faro, what remediation should look like on unceded territory, and how historic legacies are defined. Defining specific opportunities for reclamation can also mean refusal and resistance. Whetung (2017) theorizes an ethic of ‘unreconciliation’ as a political act that recognizes colonial violence and dispossession and starts from the premise that there is little possibility for repair (or reclamation); remaining unreconciled is a way to “hold space to imagine a different type of relationship from where we are now” (taken from: Curnow and Helferty, 2018, p. 155). Holding this (unreconciled, unceded) space outside of YESAB and other state-led processes provides an alternative avenue for defining remediation on Ross River’s terms. The details of how this process will work are an ongoing experimentation that moves between framing an independent environmental assessment (done by Ross River) and the possibility of strategic interventions in the currently ongoing YESA process.

One particularly exciting avenue has been a community-based revegetation project that was initiated as a response to key community concerns and objectives. This project has little connection to the bureaucratic back and forth of YESAB or the consulting science of the Project Team. Through supporting youth and Elders on the site, through sharing language and stories, through providing good jobs, and through open ended discussions about the types of plants that would be best to heal the land and wildlife, reclamation has begun long before any official licence is issued.

## **8. Preliminary Conclusions**

- **Anti- colonial redistribution of expertise**

Impact Assessment, environmental regulation and remediation more specifically rely heavily on certain types of expertise. Communities work very hard to challenge these definitions of expertise and are often sidelined for doing so. For example, Ross River has used a hybrid approach of resisting and operating within pre-existing avenues of ‘public participation’. In these “toxic politics” of resistance, recognition, and (dis)engagement, official public platforms (regulators, policies, official engagement strategies etc.) become the sites of experimentation and strategy for attempting to shape remediation – but can also be spaces that are sometimes rejected in an attempt to heal and reclaim on a communities’ own terms.

- **Remedial care as perpetual questioning and experimenting**

In remediation, there is a need to engage with the unpredictability and agency of metals, waste, water and all the living creatures bound up in the Faro Remediation project – in addition to a need for an opening of the spatial and temporal scales within which remediation relationships play out. How can mine waste, future land uses, infrastructure, monitoring and maintenance be thought about outside of an engineered box and how can we *resisting a ‘closure’ of remediation options*. To resist this ‘closing’ of remediation is to ‘acknowledge a need for eternal care’ (Kraperski and Storm, 2020); to productively confront colonial histories, rather than spreading despair (Kimmerer, 2013); and to seek to ‘hold together’ land and community, rather than focusing only on engineered containment (Schoot and Mather, 2021).

- **An ethics of remediation**

Restoration of cultural practices goes hand in hand with the remediation of contamination and the reclamation of Land, language and sacred sites (Larsen & Johnson, 2017; L. B. Simpson, 2017; Yerxa, 2014). This is not only a question about how remediation can be framed as a process for redressing environmental justice – but how Indigenous frameworks for environmental justice and management ask fundamentally different questions of remediation projects. Indigenous environmental justice provides alternative frameworks of justice that link sexual violence, gendered violence, intergenerational trauma, and environmental violence to settler colonialism and dispossession through the accumulation and contamination of Land (Borrows, 2016; Carroll, 2015; Coombes, Johnson, & Howitt, 2012; Dhillon 2017, 2018; Krakoff, 2013; LaDuke, 2005; Maracle, 2017).

Using Tsosie’s call for an “ethics of remediation,” this research seeks to frame experimentation and action-based research as questioning: questioning the ways that remediation practices close off space; investigating mechanisms to hold space for different kinds of remediation; and resisting the ways in which environmental management can perpetuate dispossession through reclamation narratives.



## Reference list

- Carroll, C. (2015). Sovereign Landscapes: Spiritual, Material and Political Relationships to Land. In *Roots of our renewal: ethnobotany and Cherokee environmental governance* (pp. 171–182). Minneapolis: University of Minnesota Press
- Coombes, B., Johnson, J. T., & Howitt, R. (2012). Indigenous geographies I: Mere resource conflicts? The complexities in Indigenous land and environmental claims. *Progress in Human Geography*, 36(6), 810–821. <https://doi.org/10.1177/0309132511431410>
- Crown Indigenous Relations and Northern Affairs Canada (CIRNAC). *Response to Ross River Dena Council's Review of the Faro Remediation Project*, February 2021. [YESAB Public Registry](#).
- Curnow, J., & Helferty, A. (2018). Contradictions of Solidarity. *Environment and Society*, 9(1), 145–163. <https://doi.org/10.3167/ares.2018.090110>
- De Leeuw, S., Cameron, E. S., & Greenwood, M. L. (2012). Participatory and community-based research, Indigenous geographies, and the spaces of friendship: A critical engagement. *Canadian Geographer*, 56(2), 180–194. <https://doi.org/10.1111/j.1541-0064.2012.00434.x>
- Dhillon, J. (2017, December). What Standing Rock teaches us about Environmental Justice. *Items: Insights from the Social Sciences*. Retrieved from <https://items.ssrc.org/what-standing-rock-teaches-us-about-environmental-justice/>
- Dhillon, J. (2018). Introduction: Indigenous Resurgence, Decolonization, and Movements for Environmental Justice. *Environment and Society*, 9(1), 1–5.
- Hoover, E. (2017). Introduction: Environmental Justice, Political Ecology and the Three Bodies of a Mohawk Community. In *The River is in Us: Fighting Toxics in a Mohawk Community* (pp. 1–28). Minneapolis: University of Minnesota Press.
- Joly, T. (2017). *Making Productive Land : Utility , encounter , and oil sands reclamation in northeastern Alberta , Canada*. University of Aberdeen.
- Kimmerer, R. W. (2013). *Braiding Sweetgrass: Indigenous Wisdom, Scientific Knowledge and the Teachings of Plants*. Minneapolis, MN: Milkweed Editions.
- Krakoff, S., & Krakoff, S. (2013). *Settler Colonialism and Reclamation : Where American Indian Law and Natural Resources Law Meet* (No. 13–11). Boulder, CO.
- LaDuke, W. (2005). *Recovering the Sacred: The Power of Naming and Claiming*. Cambridge, MA: South End Press.
- Larsen, S. C., & Johnson, J. T. (2017). Sacred Ground. In *Being Together in Place: Indigenous Coexistence in a More than Human World*. Minneapolis: University of Minnesota Press.

<https://doi.org/10.1109/PIMRC.2014.7136267>.

Kraperski, T. and Storm, A. (2021) “Nuclear waste as toxic legacy and future fantasy,” *Geshichte und Gesellschaft*, 46(1): 682-705.

Maracle, L. (2017). *My Conversations with Canadians*. Toronto, ON: BookThug.

Ross River Dena Council, Dimitrov, P., Weinstein, M., & Usher, P. (1984). *So That The Future Will Be Ours: Ross River Indian Impact Report, Volume 2*. Ross River, Yukon.

Ross River Dena Council and Weinstein, M. (1992). *Just Like People Get Lost: A Retrospective Assessment of the Impacts of the Faro Mining Development on the Land Use of the Ross River Indian People*. Ross River, Yukon.

Schoot, I. and Mather, C. (2021). “Opening up containment.” *Science, Technology, & Human Values*, 1(23).

Simpson, L. B. (2017). *As We Have Always Done*. Minneapolis: University of Minnesota Press.

Tsosie, R. (2015). Indigenous Peoples and the Ethics of Remediation: Redressing the Legacy of Radioactive Contamination for Native Peoples and Native Lands - viewcontent.cgi. *Santa Clara Journal of International Law*, 13(1), 203–272.

Tuck, E. (2009b). Suspending Damage: A Letter to Communities. *Harvard Educational Review*, 79(3), 409–428. <https://doi.org/10.17763/haer.79.3.n0016675661t3n15>

Whetung, M. (2017). *On Remaining Un-reconciled: Living Together Where We Are*. Vancouver, BC.

Yerxa, J. (2014). Gii-kaapizigemin manoomin Neyaashing : A resurgence of Anishinaabeg nationhood. *Decolonization: Indigeneity, Education & Society*, 3(3), 159–166. Retrieved from <http://decolonization.org/index.php/des/article/view/22234/18045>

Yukon Environmental and Socio-Economic Assessment Board (2021). *Preliminary Scope of Assessment, June 2021*. [YESAB Public Registry](#).