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# Beyond remediation: Containing, confronting and caring for the Giant Mine Monster

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#### Abstract

Mine remediation entails long-term risks associated with the containment and monitoring of dangerous materials. To date, research on mine remediation in Canada has focused primarily on technical fixes; little is known about the socio-political and colonial aspects of remediation. Using the Giant Mine in Yellowknife (Northwest Territories, Canada) as a case study, this research investigates the story of the Giant Mine 'Monster', how it was defined, how it has changed and how nearby communities will care for the mine in the future. Using a mixedmethods approach, this research combines literature reviews, archival analysis, key informant interviews and participant observation in analyzing the multiple experiences, practices and stories of the Giant Mine Remediation Project. Directed by the frameworks of ecological restoration, Indigenous environmental justice and science and technology studies theories of care, this research reveals that, by focusing on the technical containment of arsenic trioxide pollution, the Giant Mine Remediation Project sidelined community objectives for compensation, independent oversight and a perpetual care plan. However, through the ongoing activism of the Yellowknives Dene First Nations and community allies, the Giant Mine Monster is being creatively reframed as something to care for and live with for generations to come -a responsibility for mining wastes that settlers across Canada have yet to meaningfully reckon with. I argue that the Giant Mine case points to a critical reconceptualization of environmental remediation as an anticolonial mechanism to (re)structure, or (re)mediate, relationships with both land and people. Without a community objectives based approach to remediation, such projects risk continuing systems of colonization, marginalization and environmental injustice.

#### **Keywords**

Anticolonial, environmental justice, Giant Mine, Mine remediation, reclamation

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Article

### **Introduction: The Giant Mine Monster**

Operating from 1948 until 1999, the Giant Mine, located on the traditional territory of the Yellowknives Dene First Nations (YKDFN) and within the city limits of Yellowknife, Northwest Territories (NWT), produced over seven million ounces of gold and created over 237,000 tonnes of toxic arsenic trioxide dust (Figure 1). For the first three years of operations, no pollution controls were put in place, resulting in the dispersal of arsenic trioxide throughout the surrounding communities, forest and water systems (Houben et al., 2016). In 1951, several months after the death of a Dene child due to acute arsenic poisoning, the mining company installed pollution controls to capture the arsenic trioxide waste and store it underground. Since then, the majority of this arsenic contamination has been contained in 14 underground chambers (Keeling and Sandlos, 2012). However, for the remainder of the mine's operational life, some arsenic trioxide continued to be emitted into the surrounding environment and little was done to communicate health risks from past contamination. Today, in addition to the surface contamination and underground arsenic chambers, the Giant Mine footprint includes three arsenic-laden tailings ponds, several open pits, a non-toxic waste dump, and a patchwork of metal and hydrocarbon polluted soils that



Figure 1. Map of the Giant Mine region (Degray, 2020).

stretch beyond the mine lease boundary (Palmer et al., 2015). While many locals hoped that remediation of this abandoned mine would entail the complete removal or neutralization of the waste, they have been forced to accept that this underground threat could be there forever, returning to haunt them if containment technologies fail (Keeling and Sandlos, 2017; YKDFN, 2005).

Historically, the Yellowknives Dene communities of N'dilo and Detah were at a far greater risk of health effects from pollution due to their proximity to the mine and their reliance on polluted snow or lake water (Figure 1) (YKDFN, 2005). According to Sandlos and Keeling, 'The historical geography of arsenic contamination in the Yellowknife region reveals the unequal 'pathways of exposure' of the Yellowknives Dene people to arsenic' (Sandlos and Keeling, 2016: 8). Arsenic contamination resulted not only in sickness and death within the YKDFN community, but led to a 'profound alienation from a landscape that had, in effect, been colonized as a pollution sink for southern economic interests' (Sandlos and Keeling, 2016: 8). Despite these uneven geographies of exposure, the YKDFN have actively challenged extractive industries and contamination through 'every-day geographies of resurgence', including the continuation of traditional practices and self-governance, negotiations for land claims and demands for compensation (Daigle, 2016: 260–261). This sustained resistance has redefined the Giant Mine Remediation Project (GMRP), and stands to set a precedent for remediation across Canada and internationally.

Since the Giant Mine was abandoned in 1999, the territorial, federal and YKDFN governments have grappled with the question of how to contain and remediate the arsenic at Giant Mine. In 2007, a remediation plan was published by the federally managed GMRP featuring the 'frozen block method', which uses thermosyphon technology to freeze the ground around the arsenic chambers (essentially re-creating permafrost), sealing these areas off from the surrounding environment (SRK Consulting and SENES Consultants Limited, 2007). While this plan provided a mechanism to manage the arsenic trioxide underground, it failed to address community objectives for closure, which included an apology for past injustices, independent oversight and a plan for perpetual care (Alternatives North and YKDFN, 2011). In protest, in early 2008, the YKDFN and Alternatives North, a social justice non-governmental organization in the NWT, petitioned the City of Yellowknife to request an environmental assessment (EA) of the remediation plan from the Mackenzie Valley Environmental Impact Assessment Board (Office of the Mayor of Yellowknife, 2008). This EA then set the stage for the Giant Mine Monster – bringing together the continued resistance of the YKDFN with a discussion of the geographies, temporalities, injustices and care of mine waste.

In the public hearings for the Giant Mine Remediation EA, one participant from YKDFN referred to the Giant Mine as a 'monster' (MVEIRB, 2012). Similarly, several times throughout media articles and interviews for this research, the Giant Mine was called an 'underground monster' (Benoit, 2015; CBC News, 2016). In their study of community responses to mine waste in Chile, Ureta and Flores (2018) highlight the 'monstrous agency' apparent in both the shifting material properties of mine tailings and local narratives. They illustrate how local conceptions of mine waste as a lively 'dragon' or even 'trickster' at once defy the containment discourses of waste management while also provoking critical questions on how to relate and live with these uncanny materials. Within a similar mineral extraction context, both Li (2013, 2018) and de la Cadena (2014, 2015), show how the symbolic, material and relational forms of glaciers, mountains, monsters and other beings appear, change form and/or disappear – not only shaping environmental management processes, but also defining local activism and how resources are valued and related to. Along

these lines, this paper illustrates how the Giant Mine Monster escapes easy definition and pushes remediation narratives beyond notions of containment.

The YKDFN have stated that the 'Giant Mine Monster' is not a character referenced within their historic Indigenous Knowledge. Rather, they emphasize that the Monster has recently become a powerful story for discussing the YKDFN's relationship with the Giant Mine.<sup>1</sup> The Giant Mine Monster is much more than molecules of arsenic trioxide; it is the material embodiment of a history of environmental destruction and the colonial, racialized violence of extractive geographies enacted across Canada and YKDFN territory specifically. At the same time, according to the YKDFN, invoking the Monster is a strategic tool for resistance, activism and communication with future generations; it is both something to fear, and something to live alongside for generations to come (Benoit, 2015). With permission, I use the Giant Mine Monster narrative as a way of framing the story of remediation at Giant Mine.<sup>2</sup> In this paper, I investigate the story of the creation of the Giant Mine Monster, how it was defined, how it has changed and how the community will care for the Monster in the future. Using a mixed-methods approach, this research combines literature reviews, archival analysis, key informant interviews and participant observation in analyzing multiple experiences, practices and stories of the GMRP shared by Indigenous rightsholders and community stakeholders.<sup>3</sup>

Inspired by the critical environmental justice (EJ) and science and technology studies (STS) research by Indigenous and non-Indigenous scholars, I aim to contextualize the Giant Mine Monster within a site-specific, extractive, settler colonial framework (Tuck and McKenzie, 2015). This research also follows Indigenous scholars calls to dismantle colonial practices and to reframe relationality to each other, land and more-than-humans: 'attention to how we relate to one another can combat colonial containments of Indigenous political authority' (Starblanket and Stark, 2018: 192). Following the words of Starblanket and Stark, I look at how remediation practices contain waste, land, political authority and futures under the guise of 'cleaning-up' or 'making-better'. In this light, the Giant Mine Monster becomes a complex story of environmental and colonial (in)justice, community perseverance, intergenerational equity, and hope in the face of incredible destruction. Such a framing also pushes me, as a settler researcher, to reflect, act on and take accountability for how my work can contribute to dismantling processes of colonial extraction, while continually ensuring that I do not obscure or appropriate the production of Indigenous knowledge (Carlson, 2017; de Leeuw and hunt, 2018; Weir et al., 2019). This research work was reviewed by the YKDFN and focuses analysis on the colonial structures of remediation and extractive projects.<sup>4</sup>

Through analyses of the GMRP EA documents and the reflections of interviewees, this research finds that the challenges of remediation are much more nuanced than the technical narratives of containment often presented under the term 'remediation'. This research reveals that by focusing on the technical containment of the arsenic trioxide Monster, the GMRP sidelined YKDFN's objectives for compensation, independent oversight and a perpetual care plan. More importantly, through the ongoing activism of the YKDFN and community allies, the Giant Mine Monster is now being creatively reframed as something to care for and live with for generations to come – signalling towards a responsibility for extractive wastes that settlers across Canada have yet to meaningfully reckon with. YKDFN and their community allies' resistance to the initial Giant Mine Remediation Plan illuminates the thin line between 'healing and concealing' toxic hazards, and the complicated nuances of what it means to contain and care for degraded landscapes in perpetuity (Davis, 2015; Hoover, 2017; Simpson, 2017; Storm, 2014; Todd, 2017; Voyles, 2015). The Giant Mine case points to a critical reconceptualization of environmental remediation as an

anti-colonial mechanism to (re)structure, or (re)mediate, relationships with land, people, waste and more-than-human beings.

#### What does it mean to remediate?

Despite extensive scholarly debate surrounding the definition and practice of ecological restoration (Hall, 2005; Higgs et al., 2014; Hourdequin and Havlick, 2015), the term *remediation* has received much less critical attention and is increasingly used to refer specifically to highly contaminated sites that can never really be 'restored' and will have to be managed for long periods of time. Definitions of *environmental remediation* emphasize the technical nature of clean-up processes and include the mitigation or removal of pollution from soil, groundwater, sediments and surface water (Keeling and Sandlos, 2018). Seemingly, by using the term remediation (rather than restoration, reclamation or rehabilitation), governments and industry limit the narrative to one of containment, management and improvement (Dillon, 2014; Nunn, 2018). However, the practices of restoration, reclamation and remediation all share a narrative posited on the unproblematic return or recreation of an ideal or controlled environment, which occludes ongoing environmental injustices and focuses on technical fixes. Strategies for addressing environmental injustices and structures of colonialism *through* these clean-up practices are typically overlooked or understated in definitions of restoration, reclamation and remediation.

The generally positive association of remediation with the 'clean-up' of toxicity ignores the fact that simply containing and managing a toxic site is insufficient to deal with the broader histories, legacies and liabilities connected to contaminated sites and the difficulties of perpetual care for these sites (Beckett and Keeling, 2019; Hourdequin and Havlick, 2015; Joly, 2017; Kempton et al., 2010). As Nunn states, the history of toxicity on Indigenous territories across Canada, 'cannot be understood simply through the lens of chemical contamination since the poisoning of people and traditional territory are embedded with histories of political control and expressions of toxic disregard for Indigenous life' (Nunn, 2018: 6). Mine wastelands are created and re-created as a part of broader processes of colonial dispossession of land, racism and capitalism, which deem certain spaces (and people) as 'wasted' or 'expendable' (Liboiron et al., 2018; Nixon, 2011; Voyles, 2015). Positive industry and regulatory narratives about re-greening, technical improvement and the ability to recreate past landscapes (often determined by settler experts) conveniently erase how these wastelands are *continually* created throughout mining exploration, operations, closure and monitoring (Krupar, 2013; Ottinger, 2013). Restoration/reclamation/ remediation narratives are thereby enrolled in recognizing past *harm* without dismantling continuing colonial structures of violence in the present (Coulthard, 2014; Liboiron, 2018).

One possible avenue to unsettle or resist both ahistorical and apolitical approaches to remediation is through what Yaqui legal scholar Rebecca Tsosie calls an 'ethics of remediation', which seeks to heal degraded land through the integration of local values, restorative justice, reconciliation and self-determination for Indigenous communities (McGregor, 2018; Tsosie, 2015; Tuck and McKenzie, 2015; Whyte, 2018). Using the case study of the remediation of radioactive contamination on Diné lands in the United States, Tsosie points to problems of epistemic and 'hermeneutical injustice', stating that:

Science policy continues to determine what a 'safe' level of contamination is and what acceptable technologies for mining are ... Indigenous people are excluded from the creation of these policies and therefor become victims of such policies... [these policies] omit the experiences of harm as spiritual and cultural. (Tsosie, 2015: 271)

According to Tsosie, an 'ethics of remediation' would honour Indigenous self-determination and would: 'build new institutions and develop intercultural norms of justice that can offer effective redress for past harms and restructure current relationships to facilitate human health and environmental restoration' (2015: 269). Attempting a more ethical remediation process is not a matter of more consultation – it is a discussion about relationality with land, people and more-than-humans, and it is a mechanism to unsettle the structures that deem some places and bodies wasteable (Daigle, 2016; Daigle and Ramírez, 2019).

Similar ethics are reflected in the study and practice of Indigenous EJ, which focuses on resistance, resurgence and the reclamation of cultural practices, land, and sacred and contaminated sites (Deloria, 2003; Hoover, 2017; McGregor, 2018; Whyte, 2016). Within an Indigenous EJ framework, restoration of cultural practices goes hand in hand with the remediation of contamination and the reclamation of land, language and sacred sites (Larsen and Johnson, 2017; Simpson, 2017; Yerxa, 2014). In this sense, Indigenous EJ is more than a fight for compensation; it 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 and Tully, 2018; Carroll, 2015; Coombes et al., 2012; Dhillon, 2018; LaDuke, 2005). In connection to Indigenous methodologies of relationality and accountability, Daigle also notes that a focus on 'everyday relational geographies of resurgence', in the context of EJ, centres not only fights for justice, but also the everyday ways that Indigenous communities have always been living in resistance (Daigle, 2016: 260–261).

Despite Canadian state rhetoric around reconciliation, consent and Indigenous engagement, remediation practice, science, and scholarship in Canada have largely failed to meaningfully engage with the extensive Indigenous EJ literature, activism and long-standing practices of Indigenous cultural and environmental reclamation (Gardner and Peters (Giibwanisi), 2014; Hoover, 2017; Simpson, 2017). Along these same lines, remediation research and practices across the world have largely failed to engage with critical sociopolitical research on the geographies, temporalities and injustices of mine waste and the communities that live with such waste. Therefore, in this research, I critically analyze the Giant Mine remediation within a socio-political and anticolonial lens, pulling on the fields of political ecology and STS (alongside the Indigenous EJ literature outlined above). Research within these fields emphasizes alternative methods of relating to waste that call for action to change inequitable structures of waste production, management and containment systems, while also centering discussion on how waste has agency across shifting geographic and temporal scales (Flores and Ureta, 2018; Hoover, 2017; Lepawsky et al., 2017; Li, 2018; Liboiron et al., 2018; Tironi and Rodríguez-Giralt, 2017; Ureta, 2016).

While catastrophic events such as tailings dam failures make mining wastelands visible for brief moments of time (Bowker and Chambers, 2017; Kossoff et al., 2014; Petticrew et al., 2015; Schoenberger, 2016), many of the chemical hazards produced through mining and controlled through remediation remain invisible and will 'persist in a geological time frame that exceeds the timescale of the human species' (Liboiron et al., 2018: 332). For example, many hard rock mines result in acid rock drainage, which can require continual water treatment (Lottermoser, 2010). In this sense, remediation plans should be framed as perpetual care plans rather than 'clean-up' plans. In addition, remediation projects often do not extend beyond certain arbitrary boundaries such as mining leases, disregarding the ability of waste to flow, bypass barriers and transform (Bird, 2016; Gregson and Crang, 2010; Reno, 2015). When focusing only on the technical mechanisms of containment, remediation projects have the potential to perpetuate 'slow violences' or 'slow disasters' as they overlook or underestimate the cumulative *material and social legacies* of mining (Erikson, 1994; Knowles, 2014; Nixon, 2011). In many cases, remediation becomes a reactionary response to slow disasters (or is a slow disaster in itself) rather than a long-term solution (Gray-Cosgrove et al., 2015).

Ureta challenges the normalization of slow disasters and infrastructure failures by calling scholars, policy makers and practitioners to go *beyond repair*, or in this context *beyond remediation*, towards waste management as a 'matter of care' (Houston and Jackson, 2016; Lepawsky et al., 2017; Ureta, 2014). As noted above, waste and remediation are often presented as apolitical issues, creating the 'illusion that solutions to all problems are to be found in a more determined application of rationally organized expertise encapsulated in management theory and practice' (Bavington, 2011: 116; Ureta, 2016). Instead, care is based on everyday practices, the expectation of failure, and the articulation of suffering and justice at multiple scales (de la Bellacasa, 2011); 'it proposes temporary and experimental ways to involve all the concerned parties in the search for alternative ways to live with our waste, in material, ethical and political terms' (Ureta, 2016: 89). Everyday practices of care, in connection to Indigenous EJ and Daigle's articulation of relational geographies of resurgence (2016), also offer mechanisms to think through responsibilities to materials such as plastic, oil or mining waste (Davis, 2015; Todd, 2017).

Critically, the idea of care can also be framed as apolitical when governments or industries 'care for' communities, but communities lose the political ability to care for themselves (Martin et al., 2015). In response, Murphy (2015) and Starblanket and Stark (2018) argue that narratives of relationality and practices of care can both be used to reproduce oppressive power and must be continually 'unsettled'. Keeping in mind the need to unsettle and politicize care and relationality, a 'matter of care' approach provides a framework to 'pause expert interventions and imperatives', confront the past, develop community-based knowledge about living with toxic waste and act on injustice with whatever means available (Tironi and Rodríguez-Giralt, 2017: 93). Such an approach aligns with Indigenous EJ and anticolonial frameworks that centre place-based resistance to colonial extractivism and focus on Indigenous self-determination and relationality between humans, morethan-humans and land (Daigle, 2016; de Leeuw and Hunt, 2018; Tuck and McKenzie, 2015). Starblanket and Stark emphasize that such relationality relies on transformative possibilities of understanding and embodiment of responsibility:

The idea here is that the reconnection of people with one another, and of individuals and the land isn't necessarily transformative in and of itself, but it is the *proliferation of relationships of care and nurturance*, in which we see ourselves having concrete roles and responsibilities, that have the greatest promise. (2018: 177 emphasis added)

Mobilizing these somewhat disperse insights on the justice, ethics and practice of remediation and care as a conceptual framework, this paper also uses anticolonialism as an analytical tool to focus on the agency and activism of communities planning for containing and living with mine waste. Anticolonialism is a 'grounded, place-based practice toward resisting, fighting against and dismantling the aims of colonial regimes, systems and ideologies' (Nunn and Whetung, 2020: 155). In the discipline of geography (more specifically political ecology, STS and EJ), anticolonial approaches theorize forms of resistance through a spatial lens, grounding ethical foundations in site-specific resistance; anticolonialism is 'a site to think about historical relations with people and place' (Nunn and Whetung, 2020: 157). Anticolonial approaches also interrogate how colonial systems of control obfuscate ongoing processes of violence and dispossession – a critical observation connected to the critiques of remediation as 'greenwashing'. Crucially, rather than simply documenting past harms, an ethical, anticolonial approach to waste management avoids the 'narratives of suffering that essentialize those who bear the disproportionate burdens of harm as victims' (Liboiron et al., 2018: 342; Murphy, 2017; Tuck, 2009).

If done justly, remediation projects have the potential to offer a place-based, anticolonial opening to restructure the relationships and inequalities developed through mining and to account for the multiple ways that marginalized communities confront, resist and live with contamination. Such an approach offers an opportunity to resist and unsettle the normalization of waste management, and instead focus on decolonial futures, community-based land-use objectives and long-term care for contaminated places. Since containment over long periods of time is nearly impossible, there is a need to create more ethical methods of living with these 'permanently polluted worlds' (Liboiron et al., 2018). At Giant Mine, such politics are made visible not only through YKDFN's interventions into defining the scope of remediation, but also in community planning for perpetual care and creative mechanisms for communicating with future generations.

#### **Creating and containing the Giant Mine Monster**

The Giant Mine Monster embodies a long and messy history of extractive relationships, dispossession and resistance, meaning that there are many different, but linked, origins of the Monster. One origin can be seen in the arsenic trioxide dust that flowed freely from the mine stack for the first three years of operation, accumulating in soils and sediments. Another origin was the government-supported decision to store arsenic trioxide waste underground, despite changing permafrost conditions and uncertainty in the mine company's ability to contain the arsenic in icy blocks (Sandlos and Keeling, 2017). Yet another origin of the Monster can be seen in the physical displacement of the YKDFN and the associated health impacts as arsenic trioxide dust permeated their communities and mining impacts pushed them away from important hunting and fishing areas (YKDFN, 2005).

These material origins of the Giant Mine Monster are intimately connected to less tangible (but extremely pervasive) structural origins, such as the settler colonial policies, and environmental racism that made space for mining while pushing aside Indigenous lives and livelihoods. Chiefs Jonas Sangris and Fred Sangris of the YKDFN articulated these injustices in a 1999 letter to the Canadian government:

The ongoing extensive damage to the social, cultural, and physical fabric of their lives and lands has never been addressed and there is an ongoing loss of their rights... This in our view constitutes a breach of the Crown's trust obligation to the Yellowknives Dene and its members. (YKDFN, 1999: 2–3)

This letter, and a community report completed by YKDFN in 2005, represented early calls for EJ through remediation and emphasized the racialized and colonial structures of mining and associated pollution (YKDFN, 2005). Several interviewees reflected that this complicated history – the creation of the Giant Mine Monster – resulted in negative feelings towards the GMRP, and suggested that the project initially failed to confront the Monster in its entirety (Black, 2016; Livingstone, 2016; O'Reilly, 2016; Paradis, 2016; Plato, 2016; Slack, 2016).

This failure was directly connected to the federal government's limited focus on the underground arsenic trioxide and their active erasure of the other origins and complexities of the Giant Mine Monster. Studies and planning for the GMRP between 1999 and 2008 presented remediation as a specific measurement goal – a checklist of 'acceptable' toxic

thresholds and mitigation strategies rather than a discussion of what the community itself deemed 'acceptable' (Slater, 2016; SRK Consulting and SENES Consultants Limited, 2007). In this way, not only did the government seek to *contain the Monster*, by focusing on arsenic, the project *contained and defined knowledge*: what knowledge was or was not relevant, and how the community could be involved.

Control over arsenic went hand in hand with control over the narrative of remediation. For example, at a June 2001 community workshop where four remediation alternatives were presented, participants expressed concerns that none of the options offered a permanent solution, even though they were presented as 'final management plans'. One participant commented:

The *in-situ* alternative is not a final solution – at best it provides a temporary holding pattern, leaving the responsibility for final treatment to future generations. It is not a responsible act by this generation, who benefited from the gold mine, to leave a burden for future generations. (Terriplan Consultants Ltd., 2001: 17)

These comments received no response, and the government moved forward with a final management plan focused on in-situ freezing. Despite government restrictions on the scope of remediation, throughout this 2001 workshop and subsequent public meetings, community members continually expressed desires for independent oversight, compensation and a perpetual care plan, and they resisted government attempts to render the history and future of the Giant Mine Monster invisible through remediation (GeoNorth Limited, 2002; Lutra Associates Ltd., 2002).

The federal government's exclusive focus on arsenic trioxide containment in the early 2000s deterred good research on the overall impacts and history of the Giant Mine and sidelined community discussions on environmental (in)justice, geographic/temporal scopes of mine waste, self-governance and perpetual care. Throughout early remediation planning, colonial normalization of remediation as a technical exercise resulted in the continuation of injustices and the erasure of Indigenous knowledge. The failure to address these concerns in good faith was also a missed opportunity to re-build relationships and trust, resulting in the publication of a Final Remediation Plan in 2007 that lacked community approval (SRK Consulting and SENES Consultants Limited, 2007). In response, the YKDFN and their community allies successfully petitioned the City of Yellowknife to request a mandatory EA of the Final Remediation Plan (Office of the Mayor of Yellowknife, 2008). This set the stage for a six-year public review of the remediation plan, stretching from 2009 to 2015.

When the YKDFN and community stakeholders forced the GMRP into an EA, they were not simply rejecting the 'frozen-block' arsenic management alternative. Rather, they were also rejecting the colonial structure of environmental planning, the constrained definition of remediation and the marginalization of calls for EJ. YKDFN and their community allies intervened in order to unsettle expert imperatives, build community-based knowledge and act on injustice – they called on the federal government to confront the Giant Mine Monster in all its forms.

#### **Confronting the Monster**

During the GMRP EA, what was initially framed as a technical containment project morphed into a much more complex and far reaching public discourse on the nature of waste, responsibility and relationality. Rather than allowing the GMRP to render the Giant Mine Monster invisible, YKDFN members and community activists harnessed the legacies and stories of the Monster to confront the intertwined histories and futures of the Giant Mine. Not only did this resistance break through government attempts to erase the history of the site, it disrupted efforts to contain knowledge about the Monster, as various actors challenged and reframed the overall remediation strategy at Giant Mine. Public resistance overflowed attempts to contain the arsenic problem as a technical one.

However, the EA structure did not make this intervention easy, placing multiple obstacles for the YKDFN and community stakeholders along the way. In the scoping stage of the EA, the GMRP proposal was approached as if it were a new development. The historic contamination (both material and social legacies) from the operations of the Giant Mine were deemed separate from the remediation process and would therefore not be 'assessed' by the review board (O'Reilly, 2015). In addition, both the federal government and the Mackenzie Valley Environmental Impact Review Board (MVEIRB) stated that off-site contamination would not be discussed and alternatives to the 'frozen-block' method would not be considered (Indian and Northern Affairs Canada and Government of the Northwest Territories, 2010). Community-based objectives for defining and evaluating remediation and future land use were also not included in the initial scope of the EA:

The remediation standard chosen is intended to improve physical conditions at the Giant Mine site. The standard of remediation is a matter of choice for the land owner, which is the GNWT. As a result, the Review Board has determined that the EA will not focus on the standard of remediation chosen. (MVEIRB, 2008: 10)

According to the Director of the GMRP at the time, community concerns about future land use and responsibility were unwarranted since the remediation plan posed no significant risks and would result in a much safer, cleaner site (MVEIRB, 2012: 24). Despite the restrictions on the scope of the assessment, the YKDFN and other community stakeholders were able to use the public hearing, held at the end of the EA process, as a platform to confront the Giant Mine Monster, and to argue against these scoping restrictions.

Testimony and submissions to the EA public hearings in 2012 revealed a pervasive lack of trust in the government-led process and a profound disconnect between the Project Team's plan and the concerns of rightsholders and stakeholders. Hearing participants understood that the 'frozen-block' method was the best option at the time and there was general acceptance that 'good science' was being done. However, for many community participants, like Kevin O'Reilly of Alternatives North, the foundational scope of remediation needed to shift focus:

On the one side you have the engineering/physical work side of the project. We think they've done most of that reasonably well. There're still some concerns. But on the human and social side, apology and compensation, we don't have that. Local political support for the project, not there. Ongoing research and development, not there. Independent oversight, not there. Long-term funding arrangements, not in place. Full disclosure of information and records, not there. No thoughts about site designation, land use controls. No comprehensive perpetual care plan. No environmental agreement. And finally, no social license or contract for this project to proceed. (MVEIRB, 2012: 113–114)

Building on the idea of social acceptability, Dr Ian Gilchrist stated that perpetual care of the Giant Mine should be framed as, '*perpetual caring, perpetual caring for people*...it leads you to go beyond some of the very physical, technical stuff that we have seen here' (MVEIRB, 2012: 37). The YKDFN and community stakeholders gave thorough presentations on what

the GMRP *could* look like with independent community oversight, future land use designs and perpetual care plans, thereby using the public hearing platform to re-define the objectives, scope and precursors for remediation (O'Reilly, 2016; Paradis, 2016; Slack, 2016).

The resulting *Report of Environmental Assessment and Reasons for Decision*, released by the MVEIRB on 20 June 2013, strongly reflected the impact of these community interventions in the public hearing, going so far as to shift the very scope of the remediation project. The report concluded, against the Project Team's many arguments, that the remediation project was 'likely to cause significant adverse impacts on the environment, including cumulative impacts arising from the potential effects of the Project in combination with the effects of past activities' (MVEIRB, 2013: i). Referencing Chief Sangris, the MVEIRB stated that, 'the concerns expressed related directly to project-specific and cumulative aspects of the proposed Project... the YKDFN view both the historical contamination and the proposed clean-up as separate wrongs' (MVEIRB, 2013: 37). In other words, the MVEIRB considered historical injustices and ongoing marginalization as central to the potential 'significant adverse impacts' of the remediation project.

Beyond the assertion that the remediation project could both cause and perpetuate significant harm, the Report of Environmental Assessment and Reasons for Decision reframed remediation in several other meaningful ways. The MVERIB rejected the proposed perpetual time frame of the project and insisted that the GMRP is an interim solution rather than a final fix. According to the MVEIRB, limiting the project timeframe to 100 years would 'facilitate ongoing research in emerging technologies towards finding a permanent solution' (MVEIRB, 2013; i). Connected to this new timeline, the Report also mandated the creation of an independent Giant Mine Oversight Board (GMOB), which is now funded for 100 years to facilitate ongoing research, to provide annual reviews of the Remediation Project and to support community engagement and education. The Report also mandated ongoing human and environmental health risk research, monitoring studies, the creation of a perpetual care plan and the signing of a GMRP Environmental Agreement. While the GMRP is still limited to the mitigation of on-site contamination and the implementation of the 'frozenblock' method for underground arsenic, the GMOB, the Environmental Agreement and the other measures outlined in the Report are now making space for ongoing community governance, independent oversight and research into better remediation alternatives in the future. Most importantly, these changes emphasized the ongoing process of remediation and perpetual care as a continual practice of monitoring, maintenance, experimentation, negotiation and research.

Another example of the re-framing of remediation is the Surface Remediation Design Engagement process (SRK Consulting Ltd, 2016). Previously, the majority of research and design work had focused on the underground arsenic, with little discussion of what would happen with surface contamination, tailings, pits and buildings. The Surface Remediation Design Engagement process directly involved the YKDFN, Yellowknife community members and multiple levels of government in the planning process for surface remediation. Beginning in 2015, this process first asked participants: 'What vision do you have for the site ... [and]... what are the important *values* that could be affected by the project' (emphasis added, SRK Consulting Inc., 2016: 4). Two major themes for surface remediation emerged:

some of the groups wanted to keep the site 'grey and ugly' to discourage people from going to or using the site, and some of the groups wanted people to be able to use some or all of the land in some way. (SRK Consulting Inc., 2016: 6–7)

Community members interviewed for this research echoed these themes. For instance, William Lines, YKDFN's Giant Mine Community Liaison, argued against any kind of recreational use of the site saying: 'We've said it a hundred times... we do not want that site to be used. We don't want it to be disturbed. We just want the monster underground to be left and not released' (Lines, 2016).

The assessment of the Remediation Project was used as a mechanism to begin the work of unsettling, (re)structuring and (re)mediating relationships between people, land and morethan-human beings and waste – relationships manifested in the ever changing Giant Mine Monster, Through the resistance and interventions staged by the YKDFN and their community allies, the GMRP morphed from a relatively detached, conflictual technical exercise, through an unusual and highly charged EA process, towards the establishment of new partnerships and practices. Processes such as the Surface Remediation Design Engagement and the GMOB have been pivotal in ensuring more meaningful community engagement and an ongoing process of oversight and communication between stakeholders (Black, 2016; Hyeck, 2016; Janes, 2016; Kefalas, 2016). According to most interviewees, in the wake of the EA, the GMRP has led to a more positive feeling in the community about remediation. While the Giant Mine Monster in its arsenic trioxide form remains front of mind, the YKDFN continues to emphasize the other forms of the Monster - injustice, colonialism and marginalization. Reckoning with these aspects of the Giant Mine Monster is a messy work in progress, but the YKDFN and community allies opened up a discussion on what unsettling and caring for the Monster may look like in the future.

#### **Caring for the Monster**

Today the Giant Mine Monster continues to be a manifestation of changing relationships; a troubled history of degradation and marginalization, and an accumulation of multiple forms of contamination that stretch beyond the mine site itself. While the EA was a moment of intense political action and what some might call an EJ triumph, this should not direct attention away from the 'slower, less visible, yet omnipresent actuality of everyday toxic exposure' (Davies, 2018: 7; Liboiron et al., 2018; Tironi and Rodríguez-Giralt, 2017). Several interviewees who were directly involved in that process reflected on the complexities of moving forward from the EA. The GMOB, the shift in the timeframe of the project and the requirement for an environmental agreement were seen as huge leaps forward. However, many interviewees expressed hesitations about the ability or willingness of the federal and territorial governments to meaningfully address structural issues associated with the remediation project, such as historical environmental injustices, apology and compensation, and responsibility for contamination outside the lease boundary. These questions continue to plague the Project. For example, the YKDFN have officially requested an apology from the federal government, with little meaningful response (Brockman, 2018). Caring for the Giant Mine Monster, the land, and the community in perpetuity requires not only a recognition of responsibility and apology for past harms, but also a dynamic articulation of what it will mean to live with and care for the site every day for generations to come (Daigle, 2016).

When interviewees reflected on the benefits and challenges of the EA process and ongoing remediation planning, they spoke little about technical details. Rather, almost every interviewee addressed issues of trust and communication (Slater, 2016). According to Horowitz, trust in scientific information is often 'contingent upon trust of whoever has generated the science and whoever will be implementing its recommendations ... trust depends ... on the reciprocal perception of, and interaction between, these parties. These relationships, in turn, are not fixed ... but fluid, continuously "evolving" (Horowitz, 2010: 617). Discussions of

trust, reciprocity and accountability are central to Indigenous EJ and anticolonial articulations of relationality (Daigle, 2016; Nunn and Whetung, 2020; Simpson, 2017). Reciprocal relationships are precarious when government officials and remediation experts continue to prioritize colonial forms of knowledge while touting reconciliation. Natalie Plato, the Director of the GMRP summarized these contradictions: 'They live in the same spot, the same dust is blowing in to their life and one person says I'm not worried about that and the other person says that's going to kill people in my community' (Plato, 2016). As one technical advisor for the YKDFN pointed out, 'you are speaking to a group of people that the federal government put into residential schools, and you think they're just going to believe you' (Slater, 2016). Echoing these sentiments, one YKDFN member said:

Since the 1930s the Yellowknives Dene had no trust with the federal government. First with the treaties; the violation of the treaties. They basically lied. And there's residential school. And then there's racism. And now they have this mining clean up... there's never been trust. (Sangris, 2016)

According to another interviewee, the government previously did little to 'facilitate, or reconcile, or address any of these legacy issues in any way, but the EA did... it did provide an opportunity... to get together to talk about this and work together on it' (O'Reilly, 2016). Moving forward from the EA, community rightsholders and stakeholders are now looking for anticolonial ways to ensure repeated reciprocity and the mutual development of care for the Giant Mine Monster (Daigle, 2016; Horowitz, 2010; Tsosie, 2015; Ureta, 2016).

Several interviewees noted that, to build trust and relationships, multiple definitions and expectations of remediation need to be considered going forward. First and foremost, interviewees noted the complexities of defining what it might mean to 'clean up' the site. Members of the Project Team continue to focus on risk management:

For me it's the question: is risk management a subset of remediation or is remediation one way to go about risk management. It's a chicken and egg question ... all risk management is sort of saying is you need three elements ... you need a contaminant or source, you need a pathway and you need a receptor. So if you remove any one of those three things you've eliminated the risk ... and it's a balance of risks, right? (Wells, 2016)

By contrast, many other interviewees saw remediation as more than risk management and questioned how the 'end state' or 'level' of remediation would be determined. Erica Janes of Alternatives North asked how clean is 'clean enough', noting:

In a discussion before the surface design workshop, the translators said they couldn't use the word remediation because it means to 'fix something,' and by the very nature of the site, it's not fixable... it's not going to go back to the way it was. Then you come to okay, well, how much is enough, and those questions are obviously, they're really hard to answer. (Janes, 2016)

Other interviewees insisted that remediation definitions needed to be expanded to include planning for future financial and governance controls and communicating with future generations: 'I just don't have a lot of faith in institutional controls being passed on and people being kept safe' (Janes, 2016). These points of contention regarding trust, risk, thresholds of contamination and the evaluation of remediation will require further exploration and dialogue as alternative mechanisms of caring for the Monster and its surrounding communities are explored. There is always the risk that environmental management at the Giant Mine

will perpetuate its colonial history if definitions of remediation continue to be limited and reciprocal relationships are ignored (Baker and Westman, 2018; Checker, 2007; Keeling and Sandlos, 2017).

For example, the GMRP continues to contain official remediation activities within the boundaries of the site's lease, while the YKDFN and community stakeholders emphasize the importance of shifting geographic and temporal boundaries and cumulative contamination. An increasing amount of research in the Giant Mine region has illustrated the extent of off-site contamination and the associated risks of exposure, especially for animals (Gavel et al., 2018; Houben et al., 2016; Jamieson, 2014; Menard et al., 2019; Palmer et al., 2015; Thienpont et al., 2016), leading many stakeholders and rightsholders to argue that the scope of remediation should be broadened:

if they're going to earn people's trust I think they're going to have to go further. Like they've gone far and that's great, but there's more and the more people find out about it, the more people are going to be aware of this arbitrary lease boundary and how crazy that is. (Janes, 2016)

Building on these ideas, one YKDFN member stated: 'the contamination will always be there cause they're not going to clean up outside the lease and so clean fish go in, dirty fish come out' (Lines, 2016). In addition, as mentioned in the 2017 GMOB *Establishment Report*, there is no way to independently track the long-term progress or effectiveness of remediation (on or off site), because no community-based measuring mechanisms have been established (Giant Mine Oversight Board, 2017).

Connected to these shifting boundaries, many interviewees conceptualized remediation as an *intertwined process* of engineering design, perpetual care, intergenerational communication and EJ; they want future generations to know how to manage and take care of the site and remember what happened there. Along these lines, several interviewees discussed how the land could be remediated to ensure that it is somehow 'special' – that people cannot live there, but at the same time, that the place and its history is not forgotten. According to the YKDFN, remediation should include some kind of visual reminder, a trigger for a story or legend about the Giant Mine Monster (Benoit, 2015; Freeman, 2016). According to one YKDFN member, if the site is left ugly, in the future, children will ask, 'why is that big scar there?' (Lines, 2016). Johanne Black, the Director of the YKDFN Land and Environment Office envisions the Giant Mine site as a communication piece in itself:

the site can serve that purpose in a big capacity if we continue to let it look like a scab in the ground that people will question why does it look like that... if we make it green and pretty, people will begin to use it and they'll identify it in the future as a recreationist area instead of a contaminated site. (Black, 2016)

Some settler interviewees expressed an interest in developing trails, recreational areas or a commemorative park. However, the YKDFN have repeatedly cautioned that residential development or the creation of trails and parks has the potential to perpetuate land dispossession and ignore the environmental injustices against the YKDFN. One common theme expressed by all groups was the inclusion of some kind of monument, interpretive centre or research centre that would document the Giant Mine's legacy and the history of the YKDFN. Such approaches resist positive industry narratives of regreening, avoid apolitical goals of restoring ideal ecosystems and centre both the legacies of the mine and the ongoing violence of colonial governance.

Finally, perpetual care for the Giant Mine Monster, as an embodiment of the human and more-than-human relationships connected to the Mine, must include a reckoning with settler colonial violence (Voyles, 2015). YKDFN members see the remediation process as foundational to discussions about land claims, reconciliation and decolonization. Disconnecting these layers from the technical aspects of remediation not only does a disservice to robust remediation planning, but perpetuate the marginalization of YKDFN's calls for apology, compensation and self-determination and overlooks practical mechanisms for including these topics within remediation work. According to Fred Sangris, former Chief of YKDFN:

The land claim will cover compensation for the loss of the land at the mine. But it's not going to compensate the loss of the people, the death, the grief, and for many years of sadness in this community. And we can never fish on this bay again. We can't go and eat berries here. For us, it's lost forever. (Sangris, 2016)

The GMRP team has continually argued that apology and compensation is not a part of its mandate, but as one GMOB Member mentioned:

I get it, they don't deal with it, but it's affecting their project and I'm surprised that there... isn't a linkage there. Maybe there is behind closed doors where they talk about how to deal with these things, but certainly on the surface it's – looking at it cynically – the divide and conquer type thing. It's obviously frustrating for the YKDFN. (Brown, 2016)

These sentiments are also reflected in the GMOB's Establishment Report, released in 2017:

The Project Team has not effectively and meaningfully responded to the YKDFN's continuing demand for a formal apology and compensation for past harm from the Giant Mine operations. These demands seem to have been largely ignored despite the Government of Canada's current commitment to reconciliation with Indigenous peoples... Failure to address the issues of a formal apology and a commitment to compensation are likely to affect the success of community engagement and the future of the remediation project. (2017: 17)

In addition to formal requests for an apology and compensation, the YKDFN has outlined other creative ways to care for the Giant Mine Monster and the community. According to the YKDFN, job and contract opportunities with the GMRP, independent oversight and community-based monitoring are important components of working towards Indigenousled governance of the project. As one interviewee from YKDFN noted, these benefits are a way to 'get something out of that site that is good... those economies will be forever, in terms of remediation and then eventual monitoring. Monitoring is going to be forever', and the YKDFN should play a prominent role in that long-term care and the economic benefits of remediation itself. The YKDFN have also begun organizing annual healing ceremonies and want to make healing a more central focus for remediation in the future:

We have a feeding the fire ceremony... And that promotes healing. It also promotes communication... it's a good relationship building with the Project. It's a good ceremony, but in terms of healing, there needs to be more than just a once a year ceremony. (Black, 2016)

Healing land is a pivotal part of Indigenous EJ work and theorizing (Hoover, 2017; Simpson, 2017) and, within Tsosie's articulation of an 'ethics of remediation', healing

land is directly connected to relational networks of care for mine wastes (Davis, 2015; Todd, 2017; Tsosie, 2015; Ureta, 2016).

Cleaning-up and caring for wastelands is a messy, never-ending negotiation process that cannot be frozen in underground bunkers or suspended in time. According to Ben Nind, the director of GMOB, the GMRP is about cleaning up a mess that is 'very close to colonization', or even 'cleaning-up colonization' (Nind, 2016). It is about conceptualizing, discussing and acting upon the connections between environmental care and community care: 'If we had a process that people trust, that results in multiple communication tools: digital, monuments, arts...each one is a step towards people coming together' (Nind, 2016). Building reminders of this history into the remediation process – be that through an interpretive centre, an 'ugly', scarred landscape, a memorial, a community-lead monitoring plan, a library, or an official apology - is essential to what rightsholders and stakeholders regard as a broader plan for the ethical care of the Giant Mine Monster and the surrounding environment. Making space for the 'messiness' of the multiple origins of the Monster, and changing relationships to land and waste within remediation planning structures avoids the normalization or domination of any one story of the mine's history and future. The continued work of the YKDFN and community allies through communitybased oversight reframes remediation as a process of caring for the multi-faceted Giant Mine Monster, while also continually questioning who is responsible for this care and what it means to live with waste in perpetuity.

#### **Conclusions: Remediation as relationality and responsibility**

The Giant Mine Monster was created within a colonial, industrial context that favoured settler-based economic development and marginalized First Nations across the Canadian North. As Nunn argues, such 'toxic encounters operate in relation to one another, and are part of larger histories and constellations of colonial practice that have and continue to produce landscapes of spatial control' (Nunn, 2018: 14). The mine's history has left many in the communities of Yellowknife, Dettah and N'dilo with experiences of environmental violence, bitterness and mistrust from past injustices. When the federal and territorial governments assumed control over the abandoned mine site, they did little to reckon with these injustices. Rather, they continued operating within a colonial system of marginalization, while focusing only on technical strategies for the containment of the underground arsenic trioxide. Early attempts at community consultation were fragmented and those who did participate were again disappointed to see that their concerns were not reflected in the initial 2007 Remediation Plan. In this context, the GMRP separated material toxicity from environmental racism and land dispossession and was an attempt to uphold patterns of elimination and marginalization by separating remediation from broader colonial structures (Liboiron et al., 2018; Nunn, 2018; Voyles, 2015). Remediation was sanitized of this baggage and rendered technical (Li, 2013). In response, the YKDFN and community allies demanded that remediation be defined and negotiated within a local, community-based context, that the legacy of the Giant Mine be confronted, and that, going forward, the relational aspects of remediation be cared for (Daigle, 2016; Joly, 2017; Todd, 2017). Containment of the Monster, they insisted, was not enough.

The YKDFN and community allies also resisted the entrenched injustices of colonial government management tools such as EAs, which are set up to assess new developments and often fail to account for historical harm, Indigenous self-determination or perpetual care (Dokis, 2015; Oppenheimer et al., 2019). Yet, in the case of the GMRP, community members were able to use the EA public hearing as a platform to change the remediation

narrative, illustrating the messy ways in which EAs of remediation projects can both erase historical injustice and provide space for alternative knowledges. Most importantly, community resistance to the remediation plan, and their strategic use of the EA process, led to a reframing of the scope of remediation from a final solution, to an interim solution. As an interim solution, the GMRP will likely never be a 'walk away' project. Instead, mechanisms such as the GMOB have been put in place to independently review the Remediation Project and undertake research and educational programmes over the next 100 years. This adjustment in the scope of the GMRP is novel in that it drastically shifts the geographic and temporal scales of how communities and governments across Canada will plan for living with and caring for toxic waste – a topic that continues to confound numerous communities internationally as they deal with the unequal material, political and economic realities of living with the waste of the Anthropocene (Liboiron et al., 2018; Tironi and Rodríguez-Giralt, 2017).

The Giant Mine case illustrates that remediation and EA do not implicitly lead to EJ and it pushes researchers, policy-makers and practitioners to think *beyond remediation* towards an approach that centres ethics, care and relationality within an anticolonial framework (Nunn and Whetung, 2020; Simpson, 2017; Todd, 2017; Tsosie, 2015; Ureta, 2016). The Giant Mine case also illustrates the potential for community activism to shift remediation to include EJ and intergenerational equity. Thinking through remediation as relational and intergenerational requires approaches that centre the ongoing processes of dismantling colonial governance structures, maintaining monitoring programmes, facilitating community dialogue and caring for land and more-than-human beings. Over the coming decades and centuries, the day-to-day care, repair and monitoring activities on the Giant Mine site will vary as waste and relationships transform, adding to the stories of the Giant Mine Monster, and presenting many new challenges for the ethics of living with and remediating toxic waste.

The case study of the Giant Mine opens a call to change the ethics surrounding technoscientific planning for remediation towards a dismantling/discontinuation of colonial structures of 'wastelanding' and a move towards *perpetual caring* for our uneasy relations with waste (Davis, 2015; Voyles, 2015). Through the relentless resistance of the YKDFN and concerned Yellowknife community members, the Giant Mine Monster is also becoming a process of land repair and relational restoration. In the 2005 Traditional Knowledge Report prepared for the GMRP, the YKDFN stated that, now that the Giant Mine has come full circle to remediation, there is a need to 'add one last step; that of helping restore relationships with the land and giving back to the land its story, and sharing that story with Yellowknife' (YKDFN, 2005: 5). The Giant Mine Monster is beginning to be (re)conceptualized as a 'story of relationships between people and the environment, and between cultures learning to co-exist' (YKDFN, 2005: 5). In this sense, calling for remediation to move beyond 'purely scientific resource-based utility narratives to involve a relational element to healing', requires a difficult restructuring of the relationships created around extractive industries and environmental management before remediation can move forward (Joly, 2017: 1). Following the ongoing work of the YKDFN and Alternatives North, I argue that articulations of remediation need to confront the daily realities and injustices of living with waste in perpetuity; in this sense, remediation can never really be 'complete' and there is a need to change the timeframes and geographies within which remediation is conceptualized and planned for, as a part of broader extractive development lifecycles.

In mining, a space that is abandoned has been un-carefully treated (Tironi and Rodríguez-Giralt, 2017). Rethinking remediation as something relational is to see remediation as the day-to-day care of a contaminated space and an ethical obligation for settlers to

take responsibility for colonial technologies and waste (Beckett and Keeling, 2019; Daigle, 2016; Hoover, 2017; Liboiron et al., 2018; de la Bellacasa, 2017; Todd, 2017; Whyte, 2018). Conscious engagement in the ongoing care work required to radically rework and maintain land and relationships can 'reframe how we approach material vulnerability, not as something to be avoided, dismissed or repaired, but as something to think more responsibly' (Denis and Pontille, 2017: 15). The idea of *caring for waste* can be used as a conceptual umbrella to combine the material and technical focuses of remediation, the ethical quandaries of restoration and the implications of perpetual maintenance within an Indigenous EJ framework that continually questions the power relations, geographies and temporalities of mining waste. The Giant Mine Monster is a complex mix of material, colonial and emancipatory relationships. Caring for these relationships is synonymous with caring for the waste, and such care will require constant work to restore some relationships while radically challenging others in a move towards a more ethical remediation.

# Highlights

- Mine remediation literature and practices across Canada largely focus on technical, engineering-based challenges and solutions.
- This focus sidelines historical and ongoing concerns about environmental violence, colonialism, racism and community consent.
- While remediation projects are often framed as inherently beneficial because they 'cleanup' contaminated areas, they risk continuing systems of colonization, marginalization and environmental injustice.
- This research explores how community activism and resistance, led by the Yellowknives Dene First Nation, use an EA process to reframe definitions of remediation and to pivot towards a discussion about EJ and perpetual care in extractive industries.
- The Giant Mine case points to a critical reconceptualization of environmental remediation as an anti-colonial mechanism to (re)structure, or (re)mediate, relationships with both land and people.

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#### Notes

- 1. The YKDFN has explicitly stated that the creation of the story of the Giant Mine Monster is 'in progress', and that further community discussion with Elders and members needs to occur going forward. Many community members were hesitant to consider the Monster as a part of their Indigenous Knowledge, as it has not been thoroughly discussed over generations. However, YKDFN leadership did note that they use this story as a tool (within the context of settler environmental management processes) to ensure that others understand the complex history and future of the Giant Mine, and in doing so, they change the scope/definition of the Remediation Project.
- 2. William Lines, the YKDFN Giant Mine Liaison, and Johanne Black, the YKDFN Director, the Land and Environment Department, agreed that it would be appropriate for me to use the Giant Mine Monster to inspire and structure the narrative and argument of this research.
- 3. Interviews and participant observation occurred between winter 2016 and spring 2017. Thirty-two community stakeholders were interviewed, representing the following rightsholder/stakeholder groups: Indigenous and Northern Affairs Canada, the GMRP Team, Yellowknives Dene First Nations, Alternatives North, the City of Yellowknife, the Government of the Northwest Territories and the North Slave Metis Alliance. I also interviewed several community leaders, representatives from the NWT Chambers of Mines, the Yellowknife Heritage Society, the GMOB, the Mackenzie Valley Land and Water Board, the MVEIRB and various science advisors/consultants. I participated in the Surface Remediation Design Workshop in February 2016 and attended several Giant Mine Advisory Council and GMOB public meetings throughout 2016 and 2017.
- 4. This research was completed as a part of the Toxic Legacies Project, a research partnership between Memorial University, the YKDFN, the Goyatiko Language Society (a YKDFN non-profit) and Alternatives North (a Yellowknife environmental and socio justice coalition).

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