



21 July 2025

[REDACTED]
United Nations Human Rights
Office of the High Commissioner
Special Procedure Branch

Dear [REDACTED]

Subject: Response to Concerns Raised in Letter Dated 11 June 2025

Thank you for sharing the letter dated 11 June 2025. We acknowledge the concerns raised and appreciate the opportunity to provide a transparent, fact-based response. We remain committed to upholding the highest standards of environmental, health, and social responsibility, while promoting open and constructive dialogue.

Background

The Tsumeb Smelter, constructed in the 1950s, has changed ownership several times over its long history. When Dundee Precious Metals (“**DPM**”) acquired the facility in 2010, it was an aging operation with serious infrastructure and environmental challenges. Over the subsequent decade, DPM invested significantly capital to modernize the smelter and bring it in line with both Namibian and international environmental, health, and safety standards.

On 1 September 2024, Sinomine Resource Group (“**Sinomine**”) acquired the Tsumeb Smelter from DPM and has since continued to maintain and build upon those modernization efforts.

Health and Safety

The health and safety of our employees and the surrounding community are extremely important to us as a company.

DPM also made significant capital investments to upgrade Smelter infrastructure with the goal of improving health, safety, and environmental performance. Building on this foundation, both DPM and Sinomine have worked closely with international arsenic management experts to implement a comprehensive exposure prevention and reduction strategy. This strategy includes plant engineering improvements, enhanced arsenic management protocols for employees, targeted training, and upgraded protective equipment. These efforts have resulted in a marked reduction in skin-related health conditions and a strengthened safety culture across the site.



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The Smelter leadership has strengthened and upheld safety protocols over the years, invested in advanced personal protective equipment, and expanded both onsite health initiatives and support for local healthcare services.

In 2011, DPM, the previous owner, partnered with the Namibian government and the World Health Organization (“**WHO**”) to conduct one of the most comprehensive occupational health studies in Southern Africa. More than 1,700 current and former employees were evaluated. The study found no occupational illnesses linked to arsenic exposure. While a higher than average occurrence of skin rashes was observed, DPM promptly implemented enhanced monitoring and workplace controls to mitigate this issue.

Community Health

DPM further expanded its health and safety efforts by commissioning an independent public health expert to conduct community health studies in 2016 and 2018, with the results publicly released in 2019. A subsequent study, carried out in 2023 by the same independent expert, reaffirmed earlier findings. Notably, the studies confirmed that the average biological exposure index for Tsumeb residents showed no significant difference when compared to the control population in Oshakati.

The independent health assessments conducted in both 2016 and 2023 also verified that drinking water in Tsumeb meets WHO quality standards.

It is important to clarify that the Smelter has not been a source of microbiological contamination in the municipal drinking water supply. Such contamination challenges are unrelated to Smelter operations and have been independently identified by the local municipality, which has since taken corrective action.

Claims suggesting that the Smelter shares recycled water with the municipal system are incorrect. The Smelter operates a closed-loop process water management system, in which water is recycled internally for operational use only. This system is entirely separate from the municipal potable water infrastructure, ensuring no integration of industrial wastewater into the community’s water supply.

As part of its ongoing commitment to community support, the Smelter has, on several occasions, provided maintenance assistance to the municipality to help sustain and improve local water infrastructure, thereby supporting continued access to clean and reliable water for residents.

Worker Exposure and Monitoring

Sinomine Tsumeb Smelter continues to monitor employee health through a comprehensive medical surveillance program. To date, our records do not indicate any cases of occupational disease related to arsenic exposure. All Smelter employees are covered by medical insurance and have unrestricted access to independent healthcare services, including the freedom to consult private medical practitioners of their choice without any influence from Sinomine. While contractors may have



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different healthcare arrangements, they are fully included in site-based primary healthcare services and routine occupational health surveillance.

As part of our broader wellness strategy, the on-site clinic provides primary healthcare, employee wellness services, and biological monitoring. Medical assessments are conducted by independent third-party providers using their own equipment, ensuring transparency and impartiality. Employees retain full rights to access their personal medical records. A formal process is in place to safeguard confidentiality and ensure secure custody of sensitive health information. Upon receiving their records, employees are required to acknowledge receipt and assume responsibility for the appropriate use and protection of this information.

Furthermore, as part of our corporate social responsibility initiatives, Sinomine has donated medical equipment to local health facilities in Tsumeb in support of public health efforts, including the response to Tuberculosis and COVID-19.

Following the acquisition of the Smelter, Sinomine has proactively implemented technical upgrades aimed at reducing arsenic exposure. These include enhancements to the baghouse cleaning systems, the acquisition of a dust suppression truck, and the installation of real-time arsenic monitoring systems all focused on minimizing exposure and strengthening workplace safety.

Environmental Management Plan

The Smelter operates under an approved Environmental Management Plan ("**EMP**") and holds a valid Environmental Clearance Certificate ("**ECC**"), both of which are key requirements for environmental compliance under Namibia's Environmental Management Act ("**EMA**"), No. 7 of 2007. The ECC serves as the legal authorization for conducting listed activities and is valid for a period of three years, requiring renewal prior to its expiration.

The EMP, which is a legally binding component of the environmental contract between the Smelter and the government, details the measures to manage, mitigate, and monitor environmental impacts identified during the Environmental Impact Assessment ("**EIA**"). It provides a framework for ensuring compliance throughout the project lifecycle.

Environmental monitoring results are reported on a regular basis monthly, quarterly, and semi-annually to both internal and external stakeholders, including the Smelter's Technical Services ("**STS**") Board, company management, and relevant regulatory authorities.



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Waste Management

The Smelter maintains a comprehensive waste management system that includes interim waste storage, transportation, treatment, and final disposal. Waste is categorized and managed through two dedicated facilities: one for hazardous arsenic-bearing waste and another for non-hazardous domestic and general waste.

Hazardous arsenic-bearing waste, a by-product of the copper smelting process, is disposed of in a purpose-built, lined facility commissioned in 2012. This facility was designed and constructed to meet stringent engineering and operational standards, ensuring environmentally sound disposal practices in compliance with both Namibian and international environmental regulations.

The hazardous waste facility includes two engineered disposal cells, water management ponds, a leak detection system, and other protective measures. It is fully authorized, licensed, and regularly inspected by Namibia's environmental authority. Independent third-party audits were conducted in 2017, 2019, and 2021. The October 2021 audit report concluded that the facility is a "state-of-the-art" installation, reflecting a high standard of environmental management and corporate responsibility.

Operation of the facility follows a formal Operations and Maintenance Manual. When a disposal cell reaches full capacity, it is sealed with an engineered capping system designed to isolate the waste from the environment and facilitate long-term monitoring and aftercare.

In addition, Sinomine has developed and commissioned a modern, fully licensed general waste management facility for non-hazardous waste. This facility was officially inaugurated by the Namibian Environmental Commissioner in September 2023.

The Smelter also operates a robust waste administration, operations, and monitoring system, supported by qualified personnel. This ensures that all waste generated onsite is properly classified, tracked, and managed in full alignment with applicable environmental standards and regulations.

Surface and Groundwater Management

The Smelter operates a comprehensive Surface Water Infrastructure Management Program, supported by significant infrastructure investments over the past 5 years. Key components of this program include the construction of a lined pollution control dam and the lining of process water channels aimed at preventing groundwater contamination and enhancing overall environmental performance.

To monitor the effectiveness of these measures, the facility maintains a robust water monitoring system consisting of 31 active groundwater monitoring boreholes and 9 surface water monitoring points. These are sampled regularly, with results assessed against national water quality standards to ensure ongoing compliance.



In addition, the Smelter has strengthened its water recycling practices through the construction of silt traps, which help improve the quality of return water. This, in turn, has reduced the reliance on raw water for processing activities and contributed to a more sustainable overall water balance.

Groundwater Quality Monitoring and Modeling

The Smelter maintains a rigorous groundwater quality monitoring program, developed in consultation with both internal experts and independent third parties. Monitoring points are strategically located within the Smelter boundary and in surrounding community areas to ensure comprehensive spatial coverage and early detection of any potential groundwater impacts.

Groundwater modeling exercises were conducted by independent specialists in 2016, 2019, and 2020. The results of these studies confirm that the contamination plume remains localized within the Smelter boundary and does not extend beyond the site. In line with its commitment to proactive environmental management, the Smelter continues to explore and implement pilot projects aimed at groundwater remediation and long-term risk reduction.

As part of these efforts and aligned with the principle of environmental stewardship the Smelter has received formal approval from the Namibian Environmental Commissioner to construct a NAD 2 billion Multi-Metals Recycling Project. This project will reprocess historical waste tailings to recover valuable rare earth minerals, while simultaneously addressing a known legacy contamination source. Construction of the Multi-Metals Recycling Plant is currently underway.

Ambient Air Quality Management

The Smelter has achieved a 95% reduction in Sulphur Dioxide (SO₂) emissions through significant infrastructure investments aimed at improving air quality and environmental performance. Key investments include the construction of a sulphuric acid plant (NAD 2.6 billion), the installation of new Pierce-Smith converters with off-gas capture systems, and the addition of fume hoods and hygiene baghouses (NAD 17.6 million). These systems work together to efficiently capture, clean, and convert SO₂ emissions into sulphuric acid, a commercially viable and marketable product. *(Refer to the appendix below for a detailed breakdown of costs.)*

Table1: *Below, completed projects to improve Environmental Performance*



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#	Community Concern / Hazard	Mitigation		
		DPMT project	Aim of project	Cost of project (N\$)
1	Emissions to air with probable air quality impacts	The installation of the Sulphuric Acid Plant	Capture over 98% of the Sulphur dioxide emissions	2.6 billion
		Installation of 6 Air Quality Monitoring Stations and 17 dust fallout deposition buckets	To monitor for Arsenic, other metals and SO ₂ in air, with equipment that are internationally recognized (EPA referenced). The dust buckets are to monitor potential dust fall on the smelter property and surrounding areas	8.0 million (Spent to date)
		Hygiene baghouse and fume hood upgrades	Reduce fugitive emissions from operations	17.6 million (Spent to date)
		Engineering and studies to determine solutions to fugitive emissions.	Reduce fugitive emissions from operations	2.8 million (Spent to date)
		Acquisition of dust and SO ₂ stack analyzer (installation pending)	To monitor for SO ₂ and dust emissions to air. To monitor efficiency of fume and dust extraction systems	2.3 million (Spent to date)
		Dust characterization study	Determine the physical and chemical characteristics of dust on site in order to inform improvement in relation to exposure reduction initiatives to employees	0.972 million (Spent to date)
2	Discharges to groundwater and surface water with probable ground water quality impacts	Upgrade to Arsenic Plant	Upgrade feeding system to reduce arsenic exposure to employees and improve arsenic containment during operations	54.7 million
		Closure & decommissioning of the Arsenic plant	To improve air quality in terms of probable arsenic emissions	548.0 million
		12 additional groundwater monitoring boreholes added to 19 boreholes bring total to 31 (plus monitoring additional 3 private water wells)	To understand groundwater quality in and around the smelter and help inform management improvement actions	1.7 million (Spent to date)
		Engineered construction of, and authorized approval of hazardous waste disposal facility	Construction of engineered and approved hazardous waste disposal landfill for arsenic dust disposal	50.4 million
3	Specialist and design studies, and pilot projects (at different stages of completion) to better understand the legacy contamination profile and better guide improvement initiatives	Construction of a general waste disposal facility	Improve general waste management on site by sorting waste and recover as much waste as possible for recycling purposes instead of disposing into landfill	14.8 million
		Tailings Management Facility (Overflow control)	Improve Surface Water Management	37.2 million
		Construction of a pollution control dam and other surface water infrastructure upgrades	Lined dam to contain wastewater so to prevent infiltration of contaminated wastewater into the groundwater	47.8 million
		Rehabilitation of trenches & Filter plant bund wall upgrades	Lined stormwater trenches to collect contaminated stormwater and process water and channel the same to pollution control dam – prevent infiltration of contaminated water into groundwater	5.6 million (Spent to date)
		Contaminated land assessment (CLA)	Assess the levels and extend of soil contamination in and around the smelter boundary to serve as a baseline information which can inform approach to the clean-up	2.6 million (Spent to date)
		Agricultural Impact Assessment	To assess potential impacts of smelter activities on the productivity of agricultural land around the smelter boundary – also to derive means to maintain and promote co-existence of smelting business and farming activities in the area	1.2 million (Spent to date)
		Phytoremediation – using plants to clean up the soils	Phytoremediation – using plants to clean up the soils	8.2 million (Spent to date)
		Groundwater model and updates	Utilizing ground water quality monitoring data to predict the spatial extent and direction of potential groundwater contamination plume	3.8 million (Spent to date)
		In-situ bio-remediation treatment of groundwater	Pilot project to test water treatment technology which involves using naturally occurring microorganisms (bacteria). Proof of Concept has been completed	1.3 million (Spent to date)
Designs for ecological rehabilitation of tailing facilities	Ecological rehabilitation (putting vegetation on the tailings to prevent dust emissions, as well as prevent water erosion and seepage)	2.5 million (Spent to date)		

To further support air quality management, the Smelter has installed an NAD 8 million ambient air quality monitoring system. This system includes six fixed ambient air quality monitoring stations and 17 dust fallout buckets, providing comprehensive coverage and data collection across key environmental parameters.

The monitoring system is operated by an independent third party to ensure accuracy and transparency. Real-time data for critical pollutants such as SO₂ and PM₁₀ is logged, analyzed, and actively monitored. A built-in alert system provides immediate notifications in the event of exceedance, enabling rapid operational adjustments to maintain compliance.

All ambient air monitoring results are regularly reported to relevant regulatory authorities and line ministries as part of the Smelter's compliance obligations.



Biodiversity Management

The Smelter has implemented a biodiversity management program, which has led to significant improvements as a result of its ongoing environmental initiatives. Notably, an investment of NAD 8.2 million was made in nursery infrastructure to support testing and cultivation of tree and plant species best suited for closure and rehabilitation management.

Furthermore, between 2016 and 2023, the Smelter in collaboration with external service providers conducted multiple biodiversity assessments within its boundaries. The initial 2016 assessment led to the development of a Biodiversity Action Plan, outlining targeted initiatives that have since been implemented, resulting in measurable ecological improvements.

Land Management

Mining activities have occurred in and around Tsumeb since 1905, with the Smelter commissioned in 1962. In 2014, DPM engaged an external consultant to carry out a Contaminated Land Assessment study to evaluate the extent and severity of land contamination. One key recommendation from these ongoing studies is the implementation of a phytoremediation project, which uses native plant species to remediate contaminated soils.

In 2018, the Smelter established a nursery dedicated to propagating *Tamarix usneoides* (Wild tamarix) and other native plants. To date, approximately 18,000 trees have been planted across various locations within the Smelter boundary as part of this pilot trial. These plants are selected for their potential as hyperaccumulators—species capable of up taking heavy metals from the soil. While the metal uptake efficiency of *Tamarix usneoides* is still being evaluated, the project shows promise for future expansion.

Additionally, the Multi-Metals Recycling Project targets historic waste resources—previously identified contamination sources—by reprocessing them to recover valuable rare earth metals. This initiative will contribute directly to the remediation and cleanup of historically contaminated land.

Closure Planning and progressive rehabilitation

As part of sustainable mine lifecycle management, the Smelter has a comprehensive closure plan in place with financial provision which is periodically reviewed. Updates to the closure planning is done with progressive rehabilitation.

For the historical contamination, Sinomine continues to implement progressive rehabilitation projects such as phytoremediation, with special aim to clean shallow contaminated soils to mention a few.



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An ecological rehabilitation design for the tailings facilities was completed and research and trials will commence with focus on the use of spontaneous revegetation—a natural process where native plants colonize disturbed areas without human intervention.

For current activities, Sinomine continues to implement mitigation measures as part of the approved Environmental Management Plan for current Smelter Operation. The Multi-Metals Recycling project is also a closure enabling strategy.

As part of its commitment to sustainable mine lifecycle management, the Smelter maintains a comprehensive closure plan with financial provisions that are regularly reviewed and updated. These updates incorporate progressive rehabilitation efforts to ensure ongoing environmental restoration.

To address historical contamination, Sinomine continues to implement progressive rehabilitation projects such as phytoremediation, specifically targeting the cleanup of shallow contaminated soils.

An ecological rehabilitation design for the tailings facilities has been completed, with upcoming research and trials focusing on spontaneous revegetation—a natural process where native plants colonize disturbed areas without human intervention.

For current operations, Sinomine actively implements mitigation measures outlined in the approved Environmental Management Plan. Additionally, the Multi-Metals Recycling project serves as a key closure-enabling strategy by addressing legacy contamination and promoting site rehabilitation.

Community Engagement and Grievances

We take community grievances seriously and respond promptly to all formally reported complaints. For example, a formal health complaint received in 2022 was thoroughly investigated, and no causal link was found between the Smelter's operations and the individual's health condition.

As part of ongoing community engagement efforts, Smelter commissioned an external service provider in 2017 to conduct an Agricultural Assessment study. This study evaluates how farming communities within the Smelter's zone of influence may be affected by both historical and current operations. The study is still underway, with upcoming steps including stakeholder consultations on the findings and recommendations.

To ensure accessibility, dedicated platforms have been established for community members and other stakeholders to submit complaints either through the Information Center or via the STS Switchboard. All complaints are logged in to a register and managed according to our Community Grievance Procedure, with the Management team actively engaging complainants to resolve issues promptly.



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Community Access to Smelter Information

To promote transparency, we host Smelter Open Days once a month for stakeholders, offering educational tours that showcase and explain our operational processes. While we develop the company’s official website, information about Sinomine Tsumeb Smelter is regularly shared on our social media platforms, Facebook, LinkedIn, and Instagram for public access. Additionally, information is readily available through the Communications Office upon request from stakeholders and the media. The Sinomine Tsumeb Information Centre, located in town, provides a daily open access venue where community members can visit and inquire about any aspect of the Smelter’s operations.

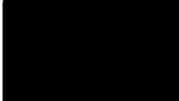
Information about proposed business development projects is shared publicly with the community through an independent Environmental and Social Impact Assessment (“**ESIA**”) process. In Namibia, this process is governed by the Environmental Management Act No. 7 of 2007, which outlines how public consultations—engaging interested and affected parties must be conducted by an independent Environmental Assessment Practitioner (“**EAP**”). This rigorous process was strictly followed for the Multi-Metals Recycling project, which is currently under construction following the issuance of an Environmental Clearance Certificate by the Namibian environmental authority. It is well established that ESIA reports are public documents, accessible to any interested or affected members of the community.

Commitment to Human Rights and Transparency

The allegation that STS interferes with independent researchers, or that the government has imposed a ban on research publications in Tsumeb, is inaccurate. STS upholds the highest ethical standards and engages independent third parties to ensure the credibility and transparency of all monitoring results and research findings.

We remain firmly committed to respecting human rights and maintaining transparency throughout our operations. We take our responsibility to engage with stakeholders seriously and continuously implement proactive measures to safeguard worker safety, community health, and environmental protection.

We appreciate the opportunity to address these concerns and welcome ongoing dialogue aimed at continuous improvement.



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SINOMINE TSUMEB SMELTER