






	STANDARD POLICY	Document No:	TNCL-OHS-POL-0008
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	MANAGEMENT OF TUBERCULOSIS AT WORK	Revision:	00
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POLICY STATEMENT

Tembo Nickel Corporation Ltd (TNCL) is committed to eliminating Pulmonary Tuberculosis in the workplace, and if not eliminated, it should be sufficiently controlled by ensuring that:

1. The workplace baseline risk assessment incorporates the risk assessment for exposure to Tuberculosis.
2. Ensuring that the vulnerable populations for exposure to Tuberculosis are identified and properly managed to prevent exposure and severity of Tuberculosis.
3. The work environment is healthy and safe, as far as practicable, to prevent the transmission of TB.
4. Ensuring the exposure to silica dust at the workplace is below the threshold limit value as far as reasonably practicable.
5. No employee will experience discrimination based on their TB status, whether in terms of continuing employment relationships or access to health insurance, occupational safety, and health care schemes.
6. Ensuring that all populations at risk complete the Tuberculosis questionnaire quarterly.
7. Ensure quarterly awareness sessions and social dialogues on Tuberculosis in the workplace.
8. Ensure that there are both active and passive case findings for Tuberculosis.
9. Ensuring the employees suffering from Tuberculosis receive appropriate care and support per the National treatment standards.

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1. INTRODUCTION


TNCL is dedicated to safeguarding the well-being of its employees by implementing a zero-harm policy. This Policy aligns with TNCL's core values of safety, respect, honesty, and integrity, which are integral to the company culture.

TB is a workplace issue because it affects the health of workers and productivity. TB is not only treatable, but it can be cured. And the workplace is ideally suited to the prevention and control of TB, a "win-win" situation for both employees and employers. While the employee receives vital information and treatment where necessary, the employer saves costs, disruption and productivity losses.

This document provides a scientific, legislative, and management approach to managing Tuberculosis in the workplace.

2. DEFINITION AND ACRONYMS

Terms	Definition
TNCL	Tembo Nickel Corporation Ltd
OHS	Occupational Health and Safety
WHO	World Health Organization.
ILO	International Labour Organization.
GM	General Manager
TB	Tuberculosis
TLV	Threshold limit value
HIV	Human Immunodeficient Virus

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3. RESPONSIBILITIES

3.1 Site General Manager (GM).

- a) The general manager's role is to ensure that the required funding is available to implement this program.

3.2 Occupational Health and Safety Manager (OHS).


- a) The Occupational Health and Safety Manager will be the overall foresee of the program.
- b) To support the Policy technically and administratively.

3.3 Occupational Health Lead.

- a) To ensure the Policy is operational and sustainable.
- b) Conduct Hazard Identification and Risk Assessment (HIRA) onsite.
- c) Develop, implement, and review the Policy.
- d) To ensure there is a health register for radiation workers.
- e) Be available to answer the employer or employees' questions or concerns.

3.5 Employees

- a) To comply with the employer's instructions regarding the management of TB at the workplace.
- b) Wear sampling equipment to monitor silica dust.
- c) To appear for medical surveillance when needed.
- d) Correctly use the PPE provided by their employer, even for jobs that will only take a couple of minutes.
- e) Take care of PPE and store it correctly.
- f) Report to the employer about any faults with PPE and report any damage.
- g) To report to the clinic if they have TB symptoms.
- h) To report to the for the respirator fit testing as far as reasonably practicable.

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4. PROCEDURE

4.1 Scope

This procedure shall apply to all TNCL employees and contractors at Tembo Nickel.

4.2 Purpose

This document aims to guide how to manage Tuberculosis in the workplace.

4.3 Legislative framework

Under the Constitution of the Republic of Tanzania (CAP2), section 14 states every person has the right to live and the protection of his life by society in accordance with the law. To further ensure every person has the right to live in the working environment, the Occupational Health and Safety Act, No. 5 of 2003, requires employers to ensure the workplace is safe and healthy for the employees. It is further a requirement that the employer is required to ensure that all workplace risks are prevented or, if not practicable, must be sufficiently controlled.

Therefore, as TNCL, we will ensure the employees' safety and health by managing Tuberculosis in the workplace. This will be through using both local and internal laws/guidelines:

- a) The Mining (Safety, Occupational Health and Environmental Protection) Regulations 2010.
- b) The Tanzania Public Health Act, 2009.
- c) The HIV and AIDS (Prevention and Control) Act
- d) The Employment and Labour Relations Act.

4.4 Tuberculosis


4.4.1 Background

"TB is a chronic infectious disease caused mainly by *Mycobacterium tuberculosis* (M. tuberculosis) and occasionally by *Mycobacterium bovis* or *Mycobacterium Africanum*.

TB is transmitted from one person to another through inhalation of droplets during coughing, laughing, talking, sneezing, and singing; however, coughing remains the most common means of transmission. Factors that contribute to an individual acquiring TB infection include:

1. Concentration and size of infectious droplets,
2. The extent of exposure (length of time the individual is exposed to the infectious droplets), Prevalence of TB in the community: the higher the prevalence of TB in the community, the higher the risk of exposure and infection,
3. Overcrowding and
4. prolonged stay with an infectious person in a poorly ventilated and lighted environment.

The risk of progression from infection to active disease depends on the individual's immune system status.

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1. Only 10% of HIV-negative people infected with TB will eventually develop active disease in their lifetime because their immune system is strong enough to suppress the multiplication of bacilli. Their TB infection, therefore, remains in the "dormant state".
2. Other groups of people have an increased risk of developing active TB disease following infection; these include:
3. People with TB/HIV co-infection have an annual risk of 5-10% and a lifetime risk 20-30 times higher for developing TB disease,
4. Silicosis (For individuals with confirmed silicosis, the risk of active Tuberculosis increases by more than
5. three-fold).²
6. The risk of suffering from silicotuberculosis increases by fifteen times for an individual with HIV and silicosis. ²
7. People with diabetes have a 1.5 times higher risk of developing TB disease than people without diabetes mellitus.
8. Other risk factors for developing TB disease include Malnutrition, recurrent infections of any kind, Substance abuse (alcoholism, drugs), Smoking, Age (very young or advanced),
9. Long-term use of steroids and other immunosuppressive therapies,
10. Poverty and
11. Cancers.

Diagnosis of TB is through clinical suspicion based on a compatible history. A careful and extensive history-taking, which includes asking the patient questions relative to Symptoms suggestive of TB disease:


1. cough for two weeks or more,
2. night sweats,
3. fever, and
4. weight loss.

If coughing, the sputum colour and quantity, History of TB disease and the treatment outcomes, the presence of other medical conditions such as HIV/AIDS and diabetes mellitus, History of TB contact(s), Tobacco-smoking, including amount and duration of smoking. History of substance abuse (drugs and alcohol) and occupational History that may suggest exposure to silica dust, especially among miners.

Diagnosis of PTB depends on the identification of tubercle bacilli either by:

1. Sputum smear microscopy
2. Culture and
3. Identification of bacterial DNA using molecular techniques.


TB treatment is initiated when the diagnosis has been confirmed. Effective TB treatment depends on:

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The use of the right anti-TB drug combinations in both the intensive and continuation phases, prescribed and taken in the correct doses according to the schedule and for the required length of time".¹

¹ Source: <https://ntlp.go.tz/tuberculosis/tuberculosis/>

²Source: <https://www.ilo.org/publications/diagnostic-and-exposure-criteria-occupational-diseases-guidance-notes-0>

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4.4.2 The population at risk for Tuberculosis at TNCL based on the risk assessment and literature review.

1. Underground workers or casual labourers, masons, helpers, blasters, drillers and drillers assistants (this is due to the exposure of silica dust)
2. Health care workers (clinic workers).
3. Plumbers.
4. Employees living with HIV/AIDS.
5. Employees living with other immunosuppressive conditions, i.e. Diabetes mellitus.

Three workplaces that can pose an additional risk for the transmission of Tuberculosis are:

1. The Gym facility.
2. Mess facility.
3. Recreation centre facility.

Three critical workplaces that inherently pose a high risk of TB transmission if not correctly managed are:

1. The clinic
2. Underground Mining
3. No diamond drilling sites

4.4.3 Approach to the management of Tuberculosis at the workplace

4.4.3.1 Risk Assessment

TNCL will conduct the baseline risk assessment and incorporate the vulnerability assessment for TB. As part of the risk assessment, the following will be done:

Ventilation assessment for:


The underground mining operation

1. Clinic
2. Recreational hall
3. Mess
4. Gym
5. Training Centre

The aim is to ensure that the acceptable air change per hour meets international standards.

The vulnerability assessment will be conducted for those who are/will be working in the high-risk areas for TB. The vulnerability assessment will incorporate two other procedures: HIV policy (TNCL-OHS-POL-0003) and respiratory equipment protective program (TNCL-OHS-SOP-0017).

Finally, the risk assessment will incorporate the air sampling assessment for inhalable and respirable risk as far as reasonably practicable. The synergistic relationship between the TB and silicosis is the reason why the exposure assessment for silica is critical.

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4.4.3.2 Engineering controls

- a) TNCL will ensure that effective ventilation systems are installed in all risk workplaces as far as reasonably practicable.
- b) TNCL will ensure the ventilation systems that will be installed are properly maintained.

4.4.3.3 Administrative controls


1. The active case findings for TB will be collected through quarterly medical. Surveillance through the TB questionnaire and daily symptoms screening to report the symptoms. The rest of the medical surveillance will be through the medical surveillance program, TNCL-OHS-SOP-0016.
2. The passive case findings will be based on the employees who report to the clinic to notify them of their TB symptoms or to report about the employees who they think have TB symptoms.
3. The employees with TB symptoms will be linked to the TB treatment Centre as quickly as reasonably practicable.
4. The confirmed TB cases will be isolated and will receive treatment for the first four weeks before being allowed to resume duty if they are fit to do so.
5. TNCL will support the employees who have contracted TB in reaching the TB treatment Centre to collect their medications as per the treatment plan.
6. All vulnerable employees who work in high-risk areas, depending on the vulnerability assessment, will be put on TB chemoprophylaxis as per the National standard.
7. All employees who will be required to use a respirator will be subjected to respirator fit testing.
8. Employees will be encouraged to know their HIV status and take the appropriate next step as per the TB policy, TNCL-OHS-POL-0003.

4.4.3.4 Information, Instructions and Training


All new employees will be provided with an awareness session on TB, and all at-risk employees will be provided with quarterly training on TB. The training will cover the following:

1. All aspects of TB management policy.
2. What is TB, and what is the mode of transmission?
3. Who is at risk of contracting and/or suffering the severe form of TB?
4. How the TB is diagnosed.
5. The importance of early reporting of TB symptoms.
6. The importance of knowing the HIV status.
7. The importance of wearing the respirators.
8. The importance of undergoing respirator fit testing test.
9. The importance of wearing a personal sampler for silica dust assessment.
10. The importance of taking TB chemoprophylaxis for those employees who will be at risk.

4.4.3.4 Personal Protective Equipment

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The use and management of personal protective equipment will be through the Personal Protective Equipment SOP (TNCL, OHS-SOP-0020) and Respiratory Equipment Protective Program SOP (TNCL-OHS-SOP-0017).

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5. SYSTEM EVALUATION

This procedure shall be reviewed at least two years by members of the OHS department and presented to the Standard Committee for approval or when organisational changes take place or are required as part of internal and external audits. The TNCL Document Controller will monitor compliance with the document control system on an ongoing basis.

6. DISTRIBUTION

List physical locations which require a controlled copy of this document.

Copy	Controlled Document Folder Location
Master	Controlled Documents Central Filing System

7. CONTRAVENTION

Any breach of this procedure shall be regarded as refusal/failure to carry out a lawful instruction and will be dealt with as per the disciplinary procedure.


8. DOCUMENT CHANGE PROCESS

The process of document change starts when the document custodian identifies there is a need to make changes within the document. The document custodian/ owner shall complete the document change request form, sign it off and submit it to the Document Controller.

The Document controller shall issue the controlled word copy of the document to the respective document custodian/owner so that changes may be made. The document custodian/owner shall resubmit the updated document to the document controller so that the document can be controlled and updated within the filing system and ready for use by the end users.

1.1 Reason for Change

A	As a result of incidents	F	Change in training requirements
B	As a result of the audit findings	G	Results of risk assessments
C	New / changes in governance documents	H	Change due to spelling or grammatical error
D	Changes in legislation	I	New document format
E	Changes in technology	J	To integrate special instruction into the document control system


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1.2 History of Change

Date of Change	Revision No	Revised Item (paragraph Number reference if required)	Reason Code	Name of Reviewer
11 th March 2023	01	All document		Dr Weinand

9. RECORD CONTROL

Document Title:	Document ID:	Responsible for Maintenance:	Responsible for Filing:	Location of Storage:	Retention Period:	Method of Disposal:
Ergonomic procedure	TNCL-OHS-SOP-0006	Document Controller	Document Controller	OHS Department	Hard Copy two Years	Hard copy shared file electronic

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10. DECLARATION

I, at this moment, declare that I have taken part in the discussion of this procedure, and I understand its contents and do commit that I shall ensure compliance hereto:

	Name and Surname	Company Number	Designation / Role	Signature	Date Signed
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