



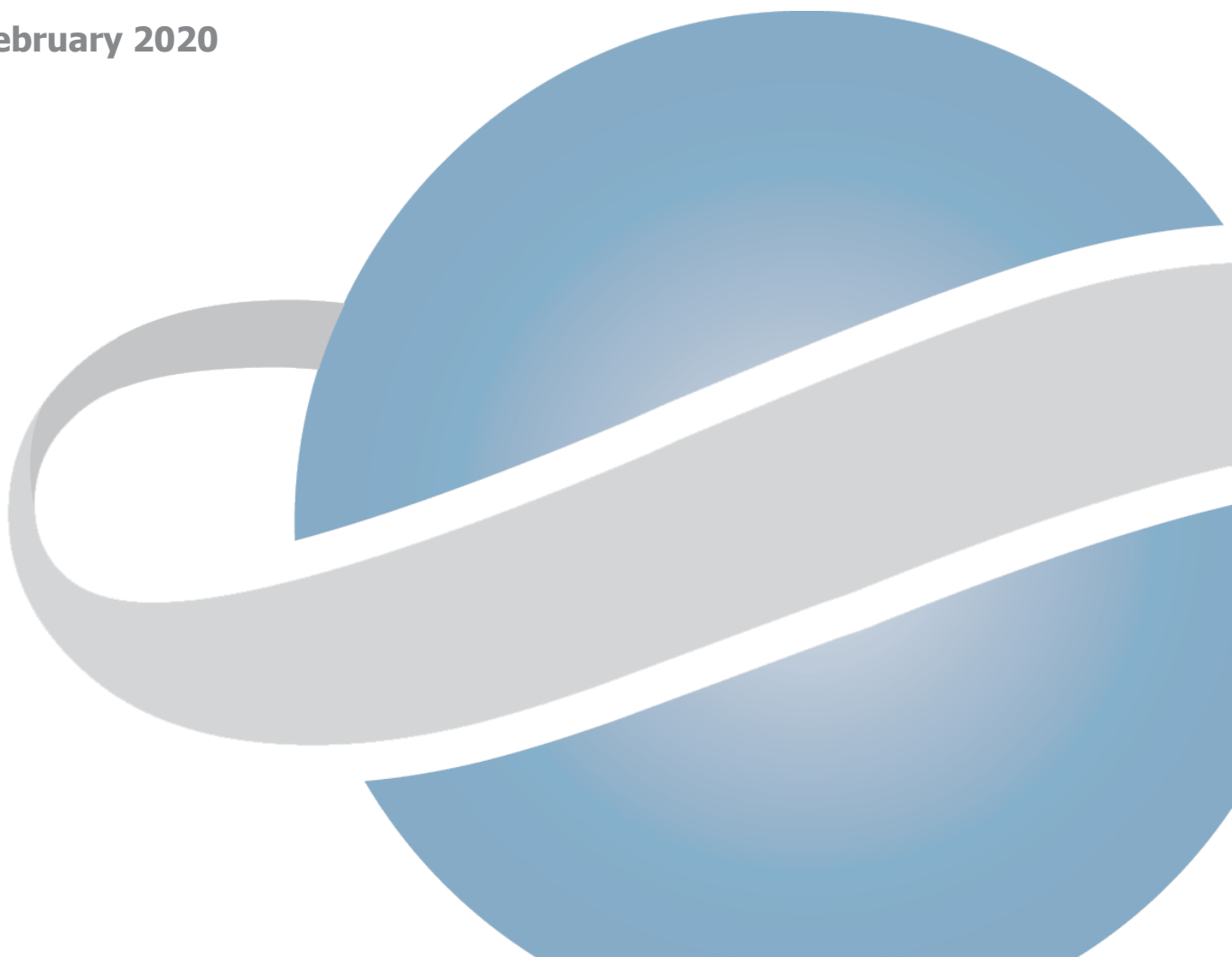
**SUSTAINABILITY**  
FUTURE GROWTH

**INTERNATIONAL CYANIDE MANAGEMENT CODE  
GOLD MINING OPERATIONS**

**Newmont Asia Pacific: Newmont Tanami Operations**

**Newmont Tanami Operations (Gold Mine)  
Recertification Audit  
Summary Audit Report**

**February 2020**





## TABLE OF CONTENTS

SUMMARY AUDIT REPORT .....	1
Name of Mine.....	1
Name of Mine Owner .....	1
Name of Mine Operator.....	1
Name of Responsible Manager.....	1
Address 1 .....	
Location Detail and Description of Operation.....	2
Audit Company.....	2
Date(s) of Audit.....	2
Auditor's Finding.....	3
Auditor and Technical Specialist.....	3
Audit Team Leader .....	3
PRINCIPLE 1 – PRODUCTION .....	4
Standard of Practice 1.1 .....	4
PRINCIPLE 2 – TRANSPORTATION.....	5
Standard of Practice 2.1 .....	5
Standard of Practice 2.2 .....	6
PRINCIPLE 3 – HANDLING AND STORAGE.....	7
Standard of Practice 3.1 .....	7
Standard of Practice 3.2 .....	9
PRINCIPLE 4 – OPERATIONS .....	11
Standard of Practice 4.1 .....	11
Standard of Practice 4.2 .....	15
Standard of Practice 4.3 .....	17
Standard of Practice 4.4 .....	19
Standard of Practice 4.5.....	20
Standard of Practice 4.6.....	20
Standard of Practice 4.7.....	21
Standard of Practice 4.8.....	23
Standard of Practice 4.9.....	25
PRINCIPLE 5 – DECOMMISSIONING.....	27
Standard of Practice 5.1 .....	27
Standard of Practice 5.2.....	28
PRINCIPLE 6 – WORKER SAFETY .....	29
Standard of Practice 6.1 .....	29
Standard of Practice 6.2 .....	30
Standard of Practice 6.3.....	32
PRINCIPLE 7 – EMERGENCY RESPONSE .....	35
Standard of Practice 7.1 .....	35
Standard of Practice 7.2.....	36
Standard of Practice 7.3.....	37
Standard of Practice 7.4.....	38
Standard of Practice 7.5.....	39
Standard of Practice 7.6.....	40



# SUSTAINABILITY

FUTURE GROWTH

PRINCIPLE 8 – TRAINING.....	42
Standard of Practice 8.1 .....	42
Standard of Practice 8.2 .....	43
Standard of Practice 8.3 .....	44
PRINCIPLE 9 – DIALOGUE .....	47
Standard of Practice 9.1 .....	47
Standard of Practice 9.2 .....	48
Standard of Practice 9.3 .....	49



## **SUMMARY AUDIT REPORT**

### **Name of Mine**

Newmont Mining Corporation operated by Newmont Tanami Pty Ltd

### **Name of Mine Owner**

Newmont Mining Corporation

### **Name of Mine Operator**

Newmont Tanami Pty Ltd

### **Name of Responsible Manager**

Shane Thorne – Processing Superintendent

### **Address**

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### **Location Detail and Description of Operation**

Newmont Mining Corporation is primarily a gold producer, with significant assets or operations in the United States, Australia, Peru, Indonesia, Ghana, Canada, New Zealand and Mexico. Founded in 1921 and publicly traded since 1925, Newmont is one of the world's largest gold producers and is the only gold company included in the S&P 500 Index and Fortune 500. Headquartered near Denver, Colorado, the company has over 34 000 employees and contractors worldwide.

In 2007, Newmont became the first gold company selected to be part of the Dow Jones Sustainability World Index. Newmont's industry leading performance is reflected through high standards in environmental management, health and safety for its employees and by creating value and opportunity for host communities and shareholders.

Newmont Tanami Operations (NTO) is situated in the Tanami Desert of the Northern Territory and includes a processing plant at the Granites, located 540 km north-west of Alice Springs, and an underground mine at Dead Bullock Soak, approximately 39 km west of the Granites.

NTO manages the Granites Gold Mine for Newmont Australia Limited. Cyanide is only used at the Granites processing plant.

NTO has 1,450 employees and contractors who work on a fly in fly out schedule.

### **Audit Company**

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### **Date(s) of Audit**

Inclusive of the period from 24-27<sup>th</sup> September 2019

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Newmont Tanami Operations  
Name of Mine

  
Signature of Lead Auditor

21<sup>st</sup> February 2020  
Date

### Auditor's Finding

This operation is:

- in full compliance
- in substantial compliance
- not in compliance

with the International Cyanide Management Code.

This operation has maintained full compliance with the International Cyanide Management Code throughout the previous three-year audit cycle.

### Auditor and Technical Specialist

Tom Carmichael (Auditor)

### Audit Team Leader

Chris Coutinho (Lead Auditor)



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21<sup>st</sup> February 2020

I attest that I meet the criteria for knowledge, experience and conflict of interest for Code Verification Audit Team Leader, established by the International Cyanide Management Institute and that all members of the audit team meet the applicable criteria established by the International Cyanide Management Institute for Code Verification Auditors.

I attest that this Summary Audit Report accurately describes the findings of the verification audit. I further attest that the verification audit was conducted in a professional manner in accordance with the International Cyanide Management Code Verification Protocol for Mining Operations Verification Protocol and using standard and accepted practices for health, safety and environmental audits.

## **PRINCIPLE 1 – PRODUCTION**

**Encourage responsible cyanide manufacturing by purchasing from manufacturers who operate in a safe and environmentally protective manner.**

### **Standard of Practice 1.1**

Purchase cyanide from manufacturers employing appropriate practices and procedures to limit exposure of their workforce to cyanide, and to prevent releases of cyanide to the environment.

in full compliance with

The operation is  in substantial compliance with Standard of Practice (SoP) 1.1

not in compliance with

### **Basis for this Finding/Deficiencies Identified:**

Newmont Tanami Operations (NTO) is in full compliance with Standard of Practice 1.1.

The Operation has purchased cyanide solely from Orica Limited (Yarwun) during the certification period. The current supply contract with Orica requires that "Orica must comply with the provisions of the International Cyanide Management Code for the Manufacture, Transport and Use of Cyanide in the Production of Gold (the Cyanide Management Code), to the extent those provisions are relevant to Orica's manufacturing, handling, storage and transport to site of the Product."

Yarwun was recertified as fully compliant with the with the International Cyanide Management Code (Code) on 22 February 2017.

## PRINCIPLE 2 – TRANSPORTATION

### Protect communities and the environment during cyanide transport.

#### Standard of Practice 2.1

Establish clear lines of responsibility for safety, security, release prevention, training and emergency response in written agreements with producers, distributors and transporters.

in full compliance with

The operation is  in substantial compliance with Standard of Practice 2.1

not in compliance with

#### Basis for this Finding/Deficiencies Identified:

Newmont Tanami Operations (NTO) is in Full Compliance with Standard of Practice 2.1.

NTO purchases cyanide from a producer and consignor under contract. The current amendment to the contract dated 2015 specifically covers all aspects of SoP 2.1 of the Code other than Item 2.1.1c) relating to addition of colorant dye.

With regards to Item c) of Question 1 of SoP 2.1 (addition of colorant dye to high strength liquid cyanide and to cyanide solid) it is noted that liquid cyanide is not delivered to NTO. Orica delivers cyanide to site in packed solid form (sparge containers and boxes). Orica is the only current supplier of cyanide to NTO. Orica has since prior to September 2018 added powdered Carmoisine dye (dark red colour) to its packed solid cyanide (sparge containers and boxes) prior to delivery to site. The Carmoisine dye is a food grade dye (not classified as hazardous according to Safe Work Australia) produced by a former Orica company (Bronson & Jacobs division of Ixom Operations Pty Ltd).

Orica has confirmed in writing to NTO that dye is added to the cyanide supplied to NTO in the Solids to Liquids product (STOLs) and boxes at time of packaging in accordance with the written instructions of NTO. NTO confirmed that this requirement will be incorporated into the new supply contract to be issued in 2020.

Therefore, NTO is in full compliance with the standard of the Code clause 2.1.

Furthermore, Orica's Australian Supply Chain, the cyanide transporter, was recertified under the Code 20 August 2018. The previous certification was granted to Toll Group on 26 January 2015. Correspondence the ICMI and Toll Group indicated that Toll was granted a one month extension to the due date for undertaking the field component of the audit.



The Contract designates that responsibilities extend to any subcontractors used by the producer, distributor, transporter or the operation for transportation-related activities.

**Standard of Practice 2.2**

Require that cyanide transporters implement appropriate emergency response plans and capabilities and employ adequate measures for cyanide management.

in full compliance with

The operation is  in substantial compliance with Standard of Practice 2.2

not in compliance with

**Basis for this Finding/Deficiencies Identified:**

Newmont Tanami Operations (NTO) is in Full Compliance with Standard of Practice 2.2.

The text of the transport contract requires that the supplier be a signatory to the ICMC for both production and transport and must maintain compliance with the ICMC for the duration of the contract. By specific reference to the Code the requirements of this Standard are addressed.

All cyanide delivered to site is transported by Toll Group (TGL) from Orica’s Yarwun facility. TGL acts as a contractor to Orica for this delivery.

TGL’s Australian supply chain was initially certified (as Toll Group) as compliant with the Code on 30 September 2014 and was recertified as compliant on 9 October 2018.

Correspondence the ICMI and Toll Group indicated that Toll was granted a one month extension to the due date for undertaking the field component of the audit. The field component of the audit was completed within this extension period.

Delivery documents (chain of custody records) confirm the loading of the cyanide onto TGL trucks at Yarwun and delivery approximately 4 days later to NTO’s site. The cyanide is not placed in any interim storage during transport and remains under the control of Orica throughout the journey from producer to the NTO site.

The delivery documents are signed upon arrival by both the truck driver and the NTO Mill Supervisor (or delegate).

The operation maintains chain of custody records for all elements of the supply chain that handle the cyanide brought to site.

## PRINCIPLE 3 – HANDLING AND STORAGE

**Protect workers and the environment during cyanide handling and storage.**

### Standard of Practice 3.1

Design and construct unloading, storage and mixing facilities consistent with sound, accepted engineering practices, quality control/quality assurance procedures, spill prevention and spill containment measures.

in full compliance with

The operation is  in substantial compliance with Standard of Practice 3.1

not in compliance with

### Basis for this Finding/Deficiencies Identified:

Newmont Tanami Operations (NTO) is in Full Compliance with Standard of Practice 3.1.

Facilities for unloading, storing and mixing cyanide have been designed and constructed in accordance with cyanide producers' guidelines, applicable jurisdictional rules and/or other sound and accepted engineering practices for these facilities. The design and construction of the cyanide unloading and storage facility has been completed in accordance with accepted engineering practices.

Unloading and storage areas for cyanide are located away from people and surface waters. The unloading and storage areas are located approximately 40 m from the store and maintenance shed, while the administration office and medical centre are approximately 70 m from the area. These are the nearest areas usually occupied by people. The nearest surface water body is an ephemeral lake system approximately 30 km to the south-west of the lease.

Liquid cyanide is not delivered to the site.

The cyanide unloading area is designed and constructed to contain and recover any leakage from the unloading tanks, by being of sufficient capacity to contain the volume of one sparge trailer load of cyanide within the concrete paved and bunded unloading area, and by directing hose spillage to a concrete lined sump equipped with a pump to transfer spillages to either of the cyanide storage tank or process water tank.

The cyanide storage tanks have ultrasonic high level indicators and conductivity probe high-high level alarms. Both the ultrasonic high level indicator and a conductivity probe high-high level indicators are scheduled for three monthly preventative maintenance checks within the site's maintenance scheduling system. The level signals and alarms report to the mill control room, and the local control room used by spotters and truck drivers whilst the cyanide unloading process is being conducted.

Cyanide mixing and storage tanks are located on a concrete paved and bunded pad that can prevent seepage to the subsurface.

Secondary containment for cyanide storage and mixing tanks are constructed with concrete material, which is a competent barrier to leakage.

Sparge-solid cyanide and Intermediate bulk container (IBC) - solid cyanide is delivered to NTO. Boxed cyanide is delivered and stored in IBCs in sea containers, in an open area with adequate natural ventilation. Both sparge and boxed cyanide can be mixed and delivered to liquid sodium cyanide storage tanks. The storage tanks are installed in the open and are vented to the atmosphere.

The sea containers containing the IBCs of cyanide remain unopened until use of the boxed cyanide is deemed necessary due to scheduling problems with sparge cyanide due to weather, or due to the cyanide reaching its use-by date. The closed and sealed containers are stored separately in a remote, built-up and locked store yard. Each container is resting on spacer blocks, which keep the containers above ground level. The area is not roofed, although the containers provide an effective seal from wet weather.

The mine site is fenced and access is restricted by a security guard and boom gate at the gate-house.

Incompatible materials such as sulfuric acid, hydrogen peroxide and diesel are stored in bulk separately from the bulk cyanide storage bund. No food, animal feed or tobacco products are stored in the vicinity of the cyanide.

### Standard of Practice 3.2

Operate unloading, storage and mixing facilities using inspections, preventive maintenance and contingency plans to prevent or contain releases and control and respond to worker exposures.

in full compliance with

The operation is  in substantial compliance with Standard of Practice 3.2

not in compliance with

#### **Basis for this Finding/Deficiencies Identified:**

Newmont Tanami Operations (NTO) is in Full Compliance with Standard of Practice 3.2.

NTO is in FULL COMPLIANCE with Standard of Practice 3.2 requiring that the operation of unloading, storage and mixing facilities uses inspections, preventive maintenance and contingency plans to prevent or contain releases and control and respond to worker exposures.

Bulk solid sodium cyanide is delivered to the site in isotainers and boxed solid cyanide is delivered in sea containers. Cyanide in isotainers is sparged from the isotainer using water which dissolves the cyanide. The reagent solution is then transferred to the storage tanks. The isotainer is then returned to the cyanide producer. The isotainer and trailer are washed down in the bunded area before leaving the unloading bay.

Boxed cyanide is mixed on a needs basis, generally when road transport cannot deliver isotainers due to road closures associated with wet weather or when the stored boxed cyanide is reaching the end of its storage life.

Plastic bags are hosed three times after the mixing process. The water used to hose the plastic bags drains into the cyanide mixing tank.

The rinsed bags are gathered and placed in the boxes and disposed in an environmentally sound manner by delivering the combination to the burn pit where they are burnt. The empty boxes and plastic bags are burnt during the night shift when the area is clear of personnel. The burning of the boxes has received regulatory authorisation. The burn pit is surrounded by a locked security fence with access restricted to nominated personnel.

The cyanide sparge isotainers and trailer are washed down in the bunded area before leaving the unloading bay. Once washed, end caps are placed on the isotainer connection points and new seals are placed on the connection points to securely close them for shipment.

The operation has developed and implemented procedures for the unloading of isotainers and mixing of boxed cyanide. These include step by step explanations of the operation of all valves, pumps and couplings.

The boxed cyanide and unloading procedure provides detail on the unloading sequence from the containers. All forklift operators are trained and qualified. These requirements are intended to prevent rupturing and puncturing.

Boxes are stacked two high, as loaded in containers by the producer. They remain in the containers until removed for cyanide mixing. The design of the containers and boxes inherently limits the height of stacking of boxes to two high.

The unloading and mixing procedures detail the hosing down of the bunded area and equipment used on completion of the task. Cyanide spill procedures provide detail on the response requirements for minor and major spill events.

Procedures for all cyanide unloading events require a spotter to be present for the entire cyanide unloading, mixing and storage process and detail the personnel protective equipment (PPE) requirements. An observation hut placed adjacent to the cyanide mixing and unloading area provides a safe area for the spotter to observe cyanide unloading, mixing and storage process. This hut is also connected to the control room and equipped with emergency shut-off valves for the cyanide unloading and mixing process.

Colarant dye is added to solid cyanide in boxes and sparge containers by the supplier prior to the cyanide leaving the manufacturing facility. This has occurred since prior to 1 July 2019.

Cyanide delivery check sheets and boxed cyanide mixing logs record the implementation of the procedures.

## **PRINCIPLE 4 – OPERATIONS**

### **Manage cyanide process solutions and waste streams to protect human health and the environment.**

#### **Standard of Practice 4.1**

Implement management and operating systems designed to protect human health and the environment utilizing contingency planning and inspection and preventive maintenance procedures.

in full compliance with

The operation is  in substantial compliance with Standard of Practice 4.1

not in compliance with

#### **Basis for this Finding/Deficiencies Identified:**

Newmont Tanami Operations (NTO) is in FULL COMPLIANCE with Standard of Practice 4.1

Extensive written management and operating plans and procedures have been developed and implemented for cyanide facilities (areas that involve cyanide solutions greater than 0.5 mg/L weak acid dissociable (WAD) cyanide) including unloading, mixing and storage facilities, leach plants, cyanide treatment facilities and tailings impoundment. These plans and procedures are maintained in the site's electronic integrated management system which also includes other procedures that impact on cyanide safety and environmental issues, such as inspections, Job Hazard Analysis (JHA), Tailings Storage Facility (TSF) and an over-riding Permit to Work requirement, without which maintenance tasks cannot be undertaken.

The operation has plans and procedures that identify the assumptions and parameters on which the facility design was based and applicable regulatory requirements as necessary to prevent or control cyanide releases and exposures consistent with applicable requirements.

The assumptions and parameters on which the facility design was based and any applicable regulatory requirements are documented in the change management procedures for new works. Examples of documentation include:

NTO's Cyanide Management Plan commits NTO to compliance with the Cyanide Code and prescribes the Code's limit of 50 ppm  $CN_{WAD}$  for the discharge of process solution to the TSFs, and use of other protective measures for other process solution water bodies with concentrations of  $CN_{WAD}$  above 50 ppm.

The operation of Cells 1 and 2 of GTD08 are subject to the Tailings Storage Facility Operating Manual, which specifies the following important operating parameters examples of which are listed below:

- Design objectives - for WAD CN in tailings to be <50 mg/L for wildlife protection
- Freeboard - In-pit tailings storage to be 0.5 m
- Freeboard - Paddock style tailings storage to be 0.3 m

Plans and procedures describe the standard practices necessary for the safe and environmentally sound operation of the facility, including the specific measures needed for compliance with the Code, such as inspections and preventative maintenance activities.

Inspections are addressed in specific detailed Inspection Procedures/Log Sheets. Areas subject to inspections include cyanide delivery and storage facilities, the leach tanks, process water usage, containment ponds, pipework and hoses, and the tailings storage facilities.

Preventative maintenance is conducted on all plant and equipment. Preventative maintenance requirements and their completion are documented within NTO's SAP-based maintenance management system. The maintenance tasks include tasks dependent upon hours worked for the equipment and more commonly maintenance tasks identified as required during the routine equipment inspections. The SAP Maintenance System produces daily work requirements and checks. No work can be conducted without a Permit to Work being completed.

The operation has a procedure to identify when changes in the site's processes or operating practices may increase the potential for the release of cyanide and to incorporate the necessary release prevention measures. The Procedure applies to engineering or technology changes, process or system changes, and organisational changes, including temporary changes. The change management process involves the identification of hazards and assessment of risk, and development of controls prior to the implementation of change following an identified process. The change review process requires identification of health, hygiene, safety, environmental and community relations risks associated with change to the facility, equipment, materials and operating procedures in use at the site. A review of NTO's Change Management Register confirmed that there had been no cyanide related changes subject to the Management of Change Procedure since the previous Recertification Audit but the process was evidenced on non-cyanide related changes. All cyanide related changes during the audit period were addressed by a major project which incorporated a formal risk review and sign-off process.

The operation has developed and implemented formal cyanide management contingency procedures for situations when inspections and monitoring identify a deviation from design or standard operating procedures. The procedures address aspects such as: spills of concentrated cyanide, process water or tailings in the plant areas and piping systems; upsets in the water balance around the process plant; high rainfall events; failure of the cyanide destruction system; and tailings dam toe seepage and wall failure.

NTO has pre-planned contingency measures for when a temporary closure or cessation of operations may be necessary. NTO's Emergency Response Plan identifies a number of scenarios when temporary closure or cessation of operations may be necessary. These scenarios include failure of the power supply and failure of the cyanide destruction facility. NTO advised that the current design of the plant is such that there is little or no need for back-up power generating capability as overflow from the tailings thickener gravitates to the containment pond. In the event of loss of power, pumps stop working, therefore no flow occurs from pumps. NTO advised that all concentrated cyanide valves fail-safe close. During cessation of operations NTO's cyanide management, inspection and monitoring activities would continue where relevant.

The operation inspects cyanide facilities on an established frequency sufficient to assure and document that they are functioning within design parameters. The inspections include visual house-keeping inspections by process personnel undertaken according to detailed checklists as well as equipment inspections undertaken by the maintenance department at pre-planned intervals prescribed in NTO's SAP-based maintenance management system. Paper records of inspections are held by the respective department supervisors – electrical maintenance, mechanical maintenance and processing administration. The operation is trailing use of electronic record keeping at the point of inspection to provide faster and more efficient response of maintenance actions.

The inspections include: tanks and associated pipework containing cyanide solutions (including all process tanks); secondary containments and associated drains; leach detection and collection systems at ponds; pipelines, pumps and valves; and ponds and impoundments (against design parameters critical to their safe operation and maintenance of the water balance). The inspections consider aspects such as structural integrity (including corrosion), evidence of leaks, water levels, and condition of monitoring devices.

Inspection frequencies are determined by the relative risks of each facility being inspected, ranging from 3-hourly for the TSFs up to 2 yearly for some tank inspections.



Detailed checklists are used to guide the inspections of plant and equipment. These inspections cover:

- Tanks holding cyanide solutions for structural integrity and signs of corrosion and leakage
- Secondary containments for their integrity, the presence of fluids and their available capacity, and to ensure that any drains are closed and, if necessary, locked, to prevent accidental releases to the environment
- Leak detection and collection systems at leach pads and ponds, as required in the design documents
- Pipelines, pumps and valves for deterioration and leakage
- Ponds and impoundments for the parameters identified in their design documents as critical to their containment of cyanide and solutions and maintenance of the water balance, such as available freeboard and integrity of surface water diversions

Inspections are documented, including the date of the inspection, the name of the inspector, and any observed deficiencies. The nature and date of corrective actions are documented. Records are maintained. Inspections by shift operations personnel are documented on log sheets to confirm that the required inspection items have been addressed. The checklists show the name of the inspector, the date and the time.

Preventive maintenance programmes are implemented and activities are documented to ensure that equipment and devices function as necessary for safe cyanide management. NTO uses SAP as a tool for managing all maintenance related to plant and equipment, including planning, scheduling, generating work orders, executing work orders and recording all maintenance related activities. There are specific maintenance programmes for different areas of the plant. Maintenance activities can be triggered by pre-planned schedules for each item of equipment or as a result of inspections, such as inspection of each tank following a Risk Based Inspection (RBI) schedule.

Work Orders for maintenance tasks include details of the works required for that item of plant or equipment and sign-off by the person carrying out the works and their supervisor confirming that the works have been implemented.

All power is generated on-site. There is a continually maintained and operating power plant at the process plant with sufficient capacity for all process plant operations as well as a power line connected to another continually maintained and operating power plant at the mine site with sufficient excess generating capacity to run the process plant. Hence, there is 100% redundancy in power supply. A gas pipeline from Alice Springs provides all weather supply of fuel for power generation. Hence, the likelihood of total power outage is considered to be very low. In the event of a total power outage, cyanide solutions would either be retained in process via fail safe valves or drain to designated containment ponds. In the unlikely event of a spill, spill response procedures are activated and are considered adequate for the largest potential spill that could occur.

### **Standard of Practice 4.2**

Introduce management and operating systems to minimize cyanide use, thereby limiting concentrations of cyanide in mill tailings.

in full compliance with

The operation is  in substantial compliance with Standard of Practice 4.2

not in compliance with

### **Basis for this Finding/Deficiencies Identified:**

Newmont Tanami Operations (NTO) is in Full Compliance with Standard of Practice 4.2.

The operation does conduct a program to determine the optimal cyanide addition rates in the mill and evaluates and adjusts addition rates as necessary when ore types or processing practices change cyanide requirements.

The overall approach to managing cyanide addition rates has not changed significantly since the previous Recertification Audit, however, the optimisation of addition rates has continued to improve as described below.

Addition rates are managed to set points and the automated control system adjusts the addition rate. Set points are reviewed against gold recovery and cyanide usage is assessed weekly and monthly. Targets are set and monitored with variances on budget being evaluated.

Daily meetings review available data via an agenda that includes consideration of parameter changes including cyanide. Changes are made to process parameters depending on recovery results, daily plant tailings re-leach (bottle roll) results, and plant cyanide and pH conditions.

On-site laboratory bottle roll tests are done daily and a monthly diagnostic leach test is conducted on-site to assess a number of parameters, including cyanide. An on-line analyser measures the free cyanide in the tails. Tails samples are also collected every two hours from Tank A6 (the last adsorption tank in the process), via a sample hatch.

Sampling details are recorded on the Tanks and Thickening Circuit Daily Log.

A further control parameter is a target of between 40 and 50 ppm WAD cyanide following cyanide destruction by the Caro's Acid system.

A daily production meeting discusses metallurgical results and plant parameters, and determines the need for modifications to the process.

There are a number of factors that drive the rate of cyanide addition into the leach circuit of a gold plant, including the requirement to achieve the target recovery determined via test work and the need to reduce reagent cost for cyanide destruction. NTO appears to be processing primary ore which is amenable to cyanide leach. There has not been a significant change in the ore characteristics in the last three years. However, the grind size is finer due to a secondary mill installed in 2017.

The operation has evaluated various control strategies for cyanide additions. The cyanide feed rate is set according to operating data, which is reviewed daily. The aim is for the feed rate to be as low as possible depending on leach recovery conditions.

A study conducted by Orica evaluated various control strategies or cyanide additions. The study concluded that depending on ore type there are possibilities of staged addition of cyanide to leach tanks 1 & 2 with potential savings in cyanide consumption and reagents used for cyanide destruction. Cyanide is added to the leach tank via a Citect - Distributed Control System (DCS) system. A cyanide analyser determines the concentration of free cyanide in leach tank 1 and provides input to a control that adjusts a variable speed drive pump to increase or decrease the rate of addition of cyanide depending on the concentration measured by the analyser. A manual titration is also carried out by the operation personnel to confirm the analyser readings. The current basis of cyanide addition was determined during the design of the plant and is commonly used in all gold plants. Manual cyanide addition points have been installed on top of the leach tanks to assist with manual optimisation of cyanide addition as required.

NTO has implemented a strategy to control its cyanide addition which has not changed in the last 3 years, though optimisation of addition rates has continued. NTO's cyanide addition control loop relies on measurements of the concentration of cyanide in the leach tank using the cyanide analyser and adjusting cyanide concentration to a set-point based on the readings from the analyser. The set-point is adjusted using manual titration and daily bottle roll leach test work and diagnostic leach test data. Records are kept in the laboratory database.

Optimisation of operations, including increased production rates, has enabled cyanide addition rates to be progressively over time. These results confirm the effectiveness of NTO's program of assessing cyanide addition rates.

### **Standard of Practice 4.3**

Implement a comprehensive water management program to protect against unintentional releases.

in full compliance with

The operation is  in substantial compliance with Standard of Practice 4.3

not in compliance with

### **Basis for this Finding/Deficiencies Identified:**

Newmont Tanami Operations (NTO) is in Full Compliance with Standard of Practice 4.3.

NTO has developed a comprehensive, probabilistic water balance for parts of its operation that are cyanide facilities (i.e. active paddock style TSFs, in-pit TSFs and process water storage facilities). The model addresses all the elements detailed within the ICMI Auditor Guidance Notes, which relate to the model being both comprehensive and probabilistic.

The model recognises that there are no leach pads at NTO and recognises the tailings impact on the water balance and the behaviour of the TSFs. Inputs include thickener underflow, % solids and plant throughput.

NTO is situated in an arid climate, where maximum and minimum winter temperatures are above freezing and thus negate the need to consider freezing and thawing conditions in the model.

NTO uses probabilistic means to manage the uncertainty and variability of the prediction of precipitation by managing their TSFs so that they can accept 1 in 1000 and 1 in 3000 year, 72 hour rainfall events.

The paddock style TSF GTD08 consists of two cells, which are of the same height. There is no potential during a storm event for one cell to flow into another. Based on-site topography, surface runoff from the up-gradient watershed has been discounted for the in-pit TSFs. The only TSF with a watershed used in the last 3 years is GTD03, which receives water from GTD01 and GTD02. This is the only TSF in the water balance model that incorporates a watershed as all others only receive rainfall that falls on the TSF or pond surface.

A representation of infiltration and seepage has not been included in this model due to the lack of supporting hydraulic data. By not taking into account any solution losses via seepage, the operation's water balance overestimates the amount of water in the TSFs, thus causing the operation to manage the facilities more conservatively.

Drain down pumping capacities and power outages are not specifically included in the model. All return water pumps are diesel operated and are not affected by any power outages that may be experienced by the process plant. To simulate pump failures, the return water from the TSFs can be set to zero, thus resulting in no water leaving the facilities.

There are no surface water discharges at NTO.

The effects of increases in storage capacity due to tailings harvesting for paste plant are not incorporated into model – therefore the model provides conservative estimates of storage capacity.

The changes to the process plant in 2017 have not increase the volumes of discharge to the TSFs beyond the model parameters.

NTOs operating procedures incorporate inspection and monitoring activities to implement the water balance and prevent overtopping of ponds and impoundments and unplanned discharge of cyanide solutions to the environment.

Process personnel inspect the in-use TSFs every three hours. The inspection includes pipeline and pump integrity, tailings level and embankment crest, pond sizes, embankment integrity and seepage.

NTOs ponds and impoundments are operated with adequate freeboard above the maximum design storage capacity determined to be necessary from water balance calculations. NTO operate their in-pit TSFs with a minimum freeboard of 300 mm. The process water dam is operated with a 350 mm minimum freeboard capable of accepting a 1 in 3000 year, 72 hour rainfall event. The facilities are inspected eight times per day, checking, among other things, the freeboard.

NTO compares precipitation results to design assumptions and revises operating practices as necessary. Precipitation intensity data is obtained from the Bureau of Meteorology (BoM) weather station at Rabbit Flat, approximately 40 km north of the mine lease. The BoM updates this precipitation intensity data on a biennial basis. NTO monitors the BoM website periodically (approximately every six months) to check for updates. Weather forecasts are checked daily to ascertain the likelihood of storm events. Based on this likelihood, the model is run with the appropriate rainfall intensity for that storm.

There have not been any uncontrolled discharges from the TSFs. During the site inspection, the TSFs, process and stormwater ponds were observed to have adequate freeboard within parameters stated in the Operation of Process Plant Water Catchment Ponds Procedure.

#### **Standard of Practice 4.4**

Implement measures to protect birds, other wildlife and livestock from adverse effects of cyanide process solutions.

in full compliance with

The operation is  in substantial compliance with Standard of Practice 4.4

not in compliance with

#### **Basis for this Finding/Deficiencies Identified:**

Newmont Tanami Operations (NTO) is in FULL COMPLIANCE with Standard of Practice 4.4.

There are no TSFs or water bodies within the NTO operations with WAD cyanide levels consistently in excess of 50 mg/L. As such, other than fencing of the mine site and gas cannons are located around the TSF to haze birds, no efforts have been made to restrict wildlife.

There have been 51 occurrences out of 3261 sample results in which the concentration of cyanide in the tailings discharge line exceeded 50 mg/L WAD cyanide limit since October 2016. The exceedances of 50 mg/L represented 44 occurrences, some of which involve more than one consecutive sample. The exceedances were resolved in each instance within 24 hours.

In comparison, based on sampling and analysis 3 times per day, the maximum decant pond concentration from 6 October 2016 to 23 September 2019 was 50.74 mg/L WAD CN from Cell 2 of GTD08 on 1 July 2019. This highlights that significant degradation of cyanide occurs in the tailings between the sampling point in the tailings discharge line and at the decant ponds.

NTO implements a procedure whereby if upsets in the Caro's Acid plant occur, then the mill is shutdown in order to prevent the discharge of tailings above 50 mg/L.

Maintaining a WAD cyanide concentration of 50 mg/L or less in open water is effective in preventing significant wildlife mortality at NTO. From October 2016 to September 2019, NTO recorded 10,741 wildlife visitations with only 13 deaths. This equates to 0.12% mortalities per visitation over the recertification period.

None of the mortalities correlated with a concentration of WAD CN in the decant pond exceeding 50 mg/L. Only one mortality coincided with a time at which the tailings discharge exceeded 50 mg/L and only for a brief period. Due to safety and practicality issues, the carcasses of dead wildlife are generally not retrieved for autopsy to determine the cause of death. Therefore, the Auditor is unable to determine if the wildlife deaths described above are due to cyanosis. Despite this the Auditor has surmised that the number of mortalities at cyanide bearing water bodies is not significant.

The operation does not operate a heap leach pad.

**Standard of Practice 4.5**

Implement measures to protect fish and wildlife from direct and indirect discharges of cyanide process solutions to surface water.

in full compliance with

The operation is  in substantial compliance with Standard of Practice 4.5

not in compliance with

**Basis for this Finding/Deficiencies Identified:**

Newmont Tanami Operations (NTO) is in Full Compliance with Standard of Practice 4.5.

This Standard of Practice is not applicable to NTO.

NTO does not have an indirect discharge to surface water. The nearest water body is an ephemeral lake system 30 km south-west of the operation. This distance involved and the intermittent nature of the lake system suggest that there is no need to test WAD cyanide levels.

**Standard of Practice 4.6**

Implement measures designed to manage seepage from cyanide facilities to protect the beneficial uses of ground water.

in full compliance with  
The operation is  in substantial compliance with Standard of Practice 4.6  
 not in compliance with

**Basis for this Finding/Deficiencies Identified:**

Newmont Tanami Operations (NTO) is in Full Compliance with Standard of Practice 4.6.

There are no legislated beneficial uses down gradient of the NTO lease. Furthermore, the Northern Territory Government has not set any groundwater quality limits for the site. The Jumbuck and Billabong borefields, where NTO takes groundwater from, are down gradient of the site, but are located approximately 40 km away and are unlikely to be affected by the NTO's cyanide facilities. Nevertheless, groundwater monitoring for WAD CN is undertaken at a significant number of groundwater monitoring bores around the mill and operational and decommissioned TSFs (both up and down gradient of the facilities).

Monitoring is undertaken bi-annually by site personnel, and external consultants prepare annual groundwater monitoring reports. Numerical modelling of the transport and fate of cyanide indicates that the exceedances of SSTVs (site specific trigger values) observed in 2017 for total cyanide are unlikely to have a long-term detrimental impact on groundwater quality.

The nearest actual beneficial groundwater use occurs at a fresh water bore (i.e. Henry's Bore), located approximately 8 km east of the site, which the indigenous population uses intermittently. The regional groundwater flow through the NTO site is in a northerly direction, and so this bore is not down gradient of the operation or subject to risk of adverse impact from NTO.


NTO harvests tailings from a disused TSF for and mixes it with deslimed tails slurry for use in the development of paste for underground backfill. The paste is produced on-site at a paste plant. Raw materials used are harvested tailings, binder (a low heat slag based cement) and raw water. Test work undertaken on harvested tailings indicates that little, if any, hazardous forms of cyanide remain within the tailings. Leachability test work on the tailings and paste suggest that cyanide concentrations would be negligible in any resultant leachate. This is supported by the results of sump water monitoring near backfill areas in the underground mine. HCN monitoring is undertaken at the paste plant on an hourly basis as the agitation involved in the process is most likely to result in the evolution of gas.

**Standard of Practice 4.7**

Provide spill prevention or containment measures for process tanks and pipelines.

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Newmont Tanami Operations  
Name of Mine

  
Signature of Lead Auditor

21<sup>st</sup> February 2020  
Date



in full compliance with  
The operation is  in substantial compliance with Standard of Practice 4.7  
 not in compliance with

**Basis for this Finding/Deficiencies Identified:**

Newmont Tanami Operations (NTO) is in FULL COMPLIANCE with Standard of Practice 4.7.

With the exception of two ring beam tanks, spill containment measures are provided for the cyanide unloading, storage, mixing and process solution tanks. All process tanks are constructed on concrete plinths except for the paste plant wheel wash recycling tanks, which are located on the contained clay lined paste drying pads at DBS and Granites. For the ring beam tanks, a RBI report was developed for each tank. Each tank has been placed on an inspection regime which addresses the tank foundations, shells, shell appurtenances and access structures. Two groundwater monitoring bores located down-hydraulic gradient of the process plant are monitored every three months for cyanide. The results do not indicate the presence of groundwater contamination.

All cyanide process tanks have secondary containment, with the exception of two ring beam tanks as noted in the response to Protocol Question 4.7.1. The two ring beam tanks are subject to a Risk Based Inspection (RBI) System developed in accordance with relevant standards and codes. Secondary containments for cyanide unloading, storage and mixing tanks are generally sized to hold a volume greater than that of the largest tank within the containment and any piping draining back to the tank, and with additional capacity for the design storm event. Bund volumes were calculated to be 194 m<sup>3</sup> compared to the largest tank volume of 160 m<sup>3</sup>.

The bund capacity of the leach and adsorption tank area is insufficient to contain a tank rupture; however, a lined overflow containment area (i.e. Gerry's Pond and Sharyn's Pond) is available for containment of any spill and provides capacity greater than 110% of the largest tank.

The concrete bund volumes for the new Acacia and the De-Slime Area constructed as part of the Tanami Expansion Project in 2017 were calculated to be 12.7 m<sup>3</sup> and 42 m<sup>3</sup> for tanks of volumes of 11.5 m<sup>3</sup> and 24.6 m<sup>3</sup> respectively, i.e. bunding capacity is greater than 110% of the tank volumes.

Procedures are in place and being implemented to prevent discharge of cyanide solution or cyanide-contaminated waters that are collected in the secondary containment areas into the environment. Secondary containment for the leach area is satisfied by an appropriately sized containment pond. All water collected within Gerry's Pond and Sharyn's Pond is pumped directly to the netted PVC Pond (Process Water Pond), which in turn is pumped to the process water tank.

All cyanide process tanks are secondarily contained. Additional secondary containment for the leach area is provided by an appropriately sized and lined containment pond (i.e. Gerry's Pond). NTO personnel have stated that this secondary containment is used for emergency situations only. Appropriate cyanide spill clean-up procedures are available. The Process Department personnel handle all large cyanide spills.

Spill prevention or containment measures are provided for all cyanide solution pipelines to collect leaks and prevent releases into the environment. There is a spill prevention tray system surrounding the cyanide delivery lines. These trays prevent any potential leaks from being released into the environment. All TSF pipelines are effectively contained within bund walls. The Filter Plant Feed Pipeline corridor has capacity to contain a 4-hour tails line failure along the whole route from the mill to the filter plant to the TSF.

Inspections are conducted in accordance with written procedures to check spillage outside bunds.

The operation has not identified any areas where cyanide pipelines present a risk to surface water and consequently there has not been any additional need to evaluate the requirement for additional protection needs. The nearest surface water body (ephemeral) is located 30 km from the site.

All pipe work exposed to cyanide is mild steel or polyethylene pipe. An evaluation of the site infrastructure was undertaken in 2008 and with the exception of the commissioning of tailings facility GTD08 and the TEP no new tanks or pipelines have been installed. The pipelines to GTD08 are the same materials used for the other tailings facilities. Piping specifications for the TEP Project reference use of carbon steel for cyanide solution piping.

#### **Standard of Practice 4.8**

Implement quality control/quality assurance procedures to confirm that cyanide facilities are constructed according to accepted engineering standards and specifications.

in full compliance with

The operation is  in substantial compliance with Standard of Practice 4.8  
 not in compliance with

**Basis for this Finding/Deficiencies Identified:**

Newmont Tanami Operations (NTO) is in FULL COMPLIANCE with Standard of Practice 4.8.

Quality control and quality assurance programmes have been implemented during construction of all new cyanide facilities and modifications to existing facilities, including cyanide unloading, storage, mixing facilities and other cyanide facilities. Evidence of quality control and quality assurance programmes for cyanide facilities constructed prior to October 2016 was reviewed during the Certification Audit and subsequent Re-Certification Audits. Evidence of quality control and quality assurance programmes for cyanide facilities constructed since October 2016 has been reviewed during this Re-Certification Audit.

Tailings dam earthworks testing and inspection technical specifications referenced AS1289 - Methods of Testing of Soils for Engineering Purposes and required density tests to be carried out not later than 24 hrs after compaction had been completed. QA/QC processes during the construction of the tailings dam confirmed the suitability of the materials used.

QA/QC programmes have addressed the suitability of materials and adequacy of soil compaction for earthworks such as tank foundations and earthen liners, and for construction of cyanide storage and process tanks and associated pipework.

An engineering consultant inspected and reviewed the design and construction of the cyanide storage and handling facilities in 2008 and concluded that the design and construction was adequate. The design of the upgrades to cyanide plant during 2016/17 was reviewed by independent consultants and found to comply with the requirements of the ICMC. QA/QC documentation confirmed the facility construction, including materials selection, complied with the proposed design.

Quality control and quality assurance records for all cyanide facilities, including those constructed prior to this ICMC recertification period, have been retained by NTO. The cyanide facilities constructed during the ICMC recertification period comprise the first embankment raising of Cell 1 and Cell 2 of GTDD08TSF (refer to 4.8.1 and 4.8.2), and the TEP. Appropriately qualified personnel have reviewed cyanide facility construction and provided documentation that the facility has been built as proposed and approved. Appropriate qualified personnel have included in-house engineers, independent consultants and construction contractor's QA/QC personnel.

**Standard of Practice 4.9**

Implement monitoring programs to evaluate the effects of cyanide use on wildlife, surface and ground water quality.

in full compliance with

The operation is  in substantial compliance with Standard of Practice 4.9

not in compliance with

**Basis for this Finding/Deficiencies Identified:**

Newmont Tanami Operations (NTO) is in FULL COMPLIANCE with Standard of Practice 4.9.

NTO has developed written standard procedures for monitoring of wildlife, groundwater and surface water. These have been developed and reviewed by NTO personnel with intimate knowledge of the site and qualified in the relevant area of expertise. Following review, all procedures are approved by relevant department managers.

NTO has procedures and management plans that outline how and where samples should be taken, sample preservation techniques, chain of custody procedures, shipping instructions and cyanide species to be analysed.

Each specific procedure outlines, if appropriate, where samples are to be taken (either within the procedure or by referencing a document or map), the steps involved and the cyanide species to be analysed. Chain of custody, QA/QC and shipping instructions are also included in the procedures. In addition, the Dispatch of Samples to External Laboratories procedure further outlines chain of custody and shipping requirements.

The operation does monitor WAD cyanide in groundwater down gradient of the site. There are approximately 74 bores situated around the process plant, process water dam and the TSFs (both operational and rehabilitated). All facilities have bores both up and down gradient of the overriding groundwater flow, and the localised groundwater flow. NTO monitor these bores on bi-annual frequencies for a range of parameters, including WAD cyanide.

The mine is located in a desert environment and the operation does not have a direct or indirect discharge to surface waters and so no monitoring of surface water is required. Nonetheless a surface water monitoring regime has been implemented. The surface water monitoring network includes low lying areas that accumulate rainwater and operational runoff, pit water and seepage collection ponds (e.g. wheel wash sumps). NTO mill personnel (since December 2017, previously environmental personnel) inspect for wildlife mortality on all water bodies potentially containing cyanide on a daily basis.

Sampling conditions are recorded on the wildlife inspections sheets and log sheets for water sampling.

The operation inspects for and records wildlife mortalities related to contact with and ingestion of cyanide solutions. Fauna monitoring was carried out daily by Environment Team up until December 2017, when the task was transferred to the Mill Technicians.

Monitoring is undertaken at frequencies adequate to characterise the medium being monitored and to identify changes in a timely manner.

## **PRINCIPLE 5 – DECOMMISSIONING**

**Protect communities and the environment from cyanide through development and implementation of decommissioning plans for cyanide facilities.**

### **Standard of Practice 5.1**

Plan and implement procedures for effective decommissioning of the cyanide facilities to protect human health, wildlife and livestock.

in full compliance with

The operation is  in substantial compliance with Standard of Practice 5.1

not in compliance with

### **Basis for this Finding/Deficiencies Identified:**

Newmont Tanami Operations (NTO) is in FULL COMPLIANCE with Standard of Practice 5.1.

The NTO Closure and Reclamation Plan discusses closure of cyanide facilities including TSFs, ponds and mill infrastructure throughout Section 8 of Plan. The Plan was prepared in 2017, revised in 2018 and is scheduled to be reviewed in 2020.

The NTO Closure and Reclamation Plan references NTO's Cyanide Decontamination and Decommissioning Plan (Decommissioning Plan) for cyanide facilities at the operation. The Decommissioning Plan was updated in October 2014 and details the actions to be taken at cessation of operations and addresses the ore processing facility including the cyanide mixing facility, grinding circuit, leaching circuit, acacia and gecko intensive leach reactors, gold room and electrowinning circuit, and associated cyanide mixing facilities, and supporting infrastructure such as pipelines. The plan details the purpose, scope, cyanide facilities, strategy, implementation and costing.

The Decontamination of Cyanide Equipment procedure addresses decontamination of equipment that has come into contact with cyanide. The procedure is applied throughout the life-of-mine and referenced in NTO's Closure and Reclamation Plan. The procedure is reviewed every 2 years.

The schedule for decommissioning activities is presented in Appendix E of the Decommissioning Plan. The schedule includes activities prior to, during and post-decommissioning. The implementation actions are conceptual due to the life of mine but are considered to be commensurate for the remaining life of mine.

### Standard of Practice 5.2

Establish an assurance mechanism capable of fully funding cyanide related decommissioning activities.

in full compliance with

The operation is  in substantial compliance with Standard of Practice 5.2

not in compliance with

#### **Basis for this Finding/Deficiencies Identified:**

Newmont Tanami Operations (NTO) is in FULL COMPLIANCE with Standard of Practice 5.2.

An external consultancy developed a costed decommissioning plan for NTO, using third party rates, in 2011 and revised the costs in 2014.

The operation does revise the cost estimates at least every five years and when revisions to the plan are made that affect cyanide-related decommissioning activities.

An external demolition contractor has provided estimates of costs for decontamination and demolition of plant and equipment for mine closure in 2012, 2013, 2017 and 2018.

These costs are collated and revised annually by NTO.

A security is required under section 43 of the Mining Management Act 2001 to enable the Minister to prevent, minimise or rectify environmental harm resulting from mining activities. Whilst not specifically for decommissioning, the security can also be accessed by the Minister for government costs incurred in the act of rehabilitation of a mining site. NTO has provided such security to the relevant entity – the Northern Territory Department of Primary Industry and Resources.

## **PRINCIPLE 6 – WORKER SAFETY**

### **Protect workers' health and safety from exposure to cyanide.**

#### **Standard of Practice 6.1**

Identify potential cyanide exposure scenarios and take measures as necessary to eliminate, reduce and control them.

in full compliance with

The operation is  in substantial compliance with Standard of Practice 6.1

not in compliance with

#### **Basis for this Finding/Deficiencies Identified:**

Newmont Tanami Operations (NTO) is in Full Compliance with Standard of Practice 6.1.

The operation has developed procedures describing how cyanide-related tasks such as unloading, plant operations, entry into confined spaces, and equipment decontamination prior to maintenance, to minimise worker exposure.

These procedures identify the hazards associated with the task and utilise the hierarchy of controls to ensure personal safety. The site also utilises Job Hazard Analysis (JHA) team-based risk assessment and a SAFECHECK individual risk assessment, to identify risks associated with a task to reduce worker risk.

The procedures and work instruction, where necessary, define the requirements with respect to the use of personal protective equipment (PPE) and addresses pre-work inspections.

Inductions include a discussion on specific PPE required on site.

The operation has a Management of Change Procedure that describes the procedures the process for assessment and approvals operational changes and modifications and to identify the potential impacts on the environment and worker health and safety and incorporate the necessary control measures. Changes are recorded on formalised change management templates. Completed management of change assessments were reviewed and found to answer predefined questions and included review and approval by particular positions and the identification assessment and mitigation of risk. The level of approval was commensurate with the level of risk.

The operation solicits worker input into the development and evaluation of health and safety procedures through several means:

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Newmont Tanami Operations  
Name of Mine

  
Signature of Lead Auditor

21<sup>st</sup> February 2020  
Date



- Document Control review workflow
- Daily Planning Meeting
- Pre-Shift Meetings
- Pre-Start Board
- Health and Safety Committee Meetings
- Vital Behaviours program

### **Standard of Practice 6.2**

Operate and monitor cyanide facilities to protect worker health and safety and periodically evaluate the effectiveness of health and safety measures.

in full compliance with

The operation is  in substantial compliance with Standard of Practice 6.2

not in compliance with

### **Basis for this Finding/Deficiencies Identified:**

Newmont Tanami Operations (NTO) is in FULL COMPLIANCE with Standard of Practice 6.2.

The operation has established that a pH of 9.8 or above limits the evolution of HCN gas during production activities and the process plant pH set point is 10.1. It was noted that the authority to change resides with the Metallurgist. Records of change are maintained in a process parameters change log.

A risk assessment document prepared by NTO's Processing Department lists the areas of plant and activities for which workers are required to wear personal monitors.

Where the potential exists for significant cyanide exposure, NTO uses ambient or personal monitoring devices to confirm that controls are adequate to limit worker exposure to hydrogen cyanide gas and sodium, calcium or potassium cyanide dust to 10 ppm on an instantaneous basis and 4.7 ppm continuously over an 8-hour period, as cyanide. Signage indicated the need to utilise the personal monitors in these areas. The alarms on the personal monitors are set at 4.7 and 10. At these levels an audible alarm will sound and the instrument will flash. The threshold limit value (TLV) for HCN gas is 10ppm. The area is to be left immediately if the HCN gas levels rise above 10ppm. If an area above 10ppm HCN gas is deemed necessary to be entered it must be done so wearing a full face respirator. No entry to any personnel is permitted above 30ppm HCN gas levels unless wearing full SCBA and having been trained to do so.

NTO has installed seven fixed continuous HCN monitors at the following locations: elution area, next to the acacia, alongside screen SW008, deslime area (2 monitors), cyanide yard, and the filter plant. The fixed monitors have alarms associated with them set at 10ppm. The fixed monitors are subject to 3-monthly calibration.

The operation identified areas and activities where workers may be exposed to cyanide in excess of 10 ppm on an instantaneous basis and 4.7 ppm continuously over an 8-hour period, and requires use of personal protective equipment in these areas or when performing these activities. This requirement is captured in signage, procedures and training and induction material. Ie

- Site Signage was found to be in place that indicated the requirement for PPE
- The inductions detail the site requirements, including PPE requirements for the site.
- PPE was observed to be worn by site workers during site inspections.

The standard PPE within the identified areas includes hard hats, eye protection, gloves, covered safety shoes and personal HCN monitors. If an area above 10ppm HCN gas is deemed necessary to be entered it must be done so wearing a full face respirator with in-date cyanide compatible canister, Goggles, Type 5/6 DuPont Tyvek coveralls or full length wet weather gear (always worn over boots), Rubber safety boots, PVC gloves (elbow length). No entry to any personnel is permitted above 30ppm HCN gas levels unless wearing full SCBA and having been trained to do so.

Hydrogen cyanide monitoring equipment is maintained, tested and calibrated as directed by the manufacturer; The operation has an onsite calibration station that records the units and calibration results in a database. Records are retained for at least one year.

High strength cyanide solution is dyed for clear identification. All solid cyanide is currently supplied to NTO by Orica. Orica adds colorant dye to the cyanide.

Warning signs have been placed at specific areas around the Mill advising workers that cyanide is present, and that smoking, open flames and eating and drinking are not allowed. This signage is supported by training.

Signage is posted when cyanide deliveries are in progress to keep non-essential persons away.

Showers, low-pressure eyewash stations and dry powder or non-acidic sodium bicarbonate fire extinguishers located at strategic locations throughout the operation and are maintained, inspected and tested on a regular basis.

The operation conducts regular inspections. The workplace inspections are done monthly and cover all safety equipment. A review of these records showed that each inspection was undertaken as programmed.

Eyewash stations, fire extinguishers and emergency showers checked during the site tour were all in working order. These are also covered through external checks by Chubb who provide clear indication of inspection status. All extinguishers are dry powder and were inspected in on a regular basis and confirmed via the site inspection.

The unloading, storage and process tanks are identified at NTO with appropriate signage. In addition, the content and direction of cyanide flow in pipes is identified via labels with arrows indicating the flow direction.

SDS' and first aid instructions were posted at the cyanide unloading area. All workers also have access to SDSs and first aid instructions through computer access to the intranet and the CHEMWATCH system. SDS' are also available in the Emergency Response area and the storage warehouse. SDS' are in the language of the workers, English.

There is a system used for reporting and investigating incidents and an Incident Investigation Procedure. Once an incident has been observed, the incident report form is completed by the individual and their supervisor. During the recertification period there was only two recorded incidents involving worker exposure to cyanide. Both were classified as being of very low actual and potential consequence by NTO. There was strong evidence of investigation and action to prevent recurrence.

### **Standard of Practice 6.3**

Develop and implement emergency response plans and procedures to respond to worker exposure to cyanide.

in full compliance with  
The operation is  in substantial compliance with Standard of Practice 6.3  
 not in compliance with

**Basis for this Finding/Deficiencies Identified:**

Newmont Tanami Operations (NTO) is in Full Compliance with Standard of Practice 6.3.

NTO has water, oxygen, a resuscitator, antidote kits and a two-way radio channelled to the control room, telephone, alarm system or other means of communication, or emergency notification readily available for use.

The site has potable water reticulated available including for drinking stations and emergency shower/eye wash stations.

The site has a fully equipped clinic with oxygen cylinder (a radio, fixed telephone and mobile phones). The site also has a well-equipped ambulance with oxygen. There is one medic on call at the process plant site 24 hours per day, seven days per week. Operators have a two-way radio whenever undertaking high risk work and in particular during unloading and mixing of cyanide.

The on-site medical clinic and the emergency team have phones for communication. The phone number is provided at inductions.

There is a site-wide alarm system that can be used to trigger evacuations of personnel and movement to designated muster points in emergency situations. CN Storage and Handling Facility shower are hooked to the Citect - Distributed Control System (DCS) with alarms whenever they are used.

Oxygen is located at approximately 6 locations at the process plant.

The operation conducts inspections of its first aid equipment including within the clinic, ambulances and processing plant regularly to ensure that it is available when needed. Materials such as cyanide antidotes are stored as directed by their manufacturer and replaced on a schedule to ensure that they will be effective when needed

NTO have several documents and procedures that form part of the overall Emergency Management Response system. The Emergency Management Plan is a high level overarching document that guides emergency and crisis management. With respect to specific response details, this is captured within the Tanami Emergency Response Plan. Supporting this are detailed instructions

NTO has its own on-site capability to provide first aid or medical assistance to workers exposed to cyanide. There is access to trained competent medics at all times. In addition to this, NTO has employed the use of OccuMED, a specialist occupational medical support organisation, who provides 24/7 Remote Medical Support. Neither the Medics nor the Emergency Response Team had been required to implement the emergency response procedures during a live incident to date.

The site has an Emergency Response Team. All members trained are in Certificate II in First Response First Aid which includes oxygen application. Transport facilities comprise the site's ambulance and access to the Royal Flying Doctor Service which is available to transport workers exposed to cyanide to the hospital in Alice Springs if required. Letters have been sent to both the Royal Flying Doctor Service (RFDS) and Alice Springs Hospital, advising of potential need to treat workers for CN exposure.

Mock emergency drills are conducted periodically to test response procedures for various cyanide exposure scenarios, and lessons learned from the drills are incorporated into response planning.

Cyanide related emergency response drills are conducted at least once per year.

## **PRINCIPLE 7 – EMERGENCY RESPONSE**

**Protect communities and the environment through the development of emergency response strategies and capabilities.**

### **Standard of Practice 7.1**

Prepare detailed emergency response plans for potential cyanide releases.

in full compliance with

The operation is  in substantial compliance with Standard of Practice 7.1

not in compliance with

### **Basis for this Finding/Deficiencies Identified:**

Newmont Tanami Operations (NTO) is in Full Compliance with Standard of Practice 7.1.

NGT has developed a plan to address potential accidental releases of cyanide that may occur on site or may otherwise require response. This is driven by an emergency management plan that drives an emergency response plan.

The application of these plans is via the use of an electronically based Rapid Response System, this includes criteria for level of activation required and associated instruction for various roles.

Detail on the application of emergency response is included in various procedures and work instructions that clearly articulate the process.

The Plan considers the potential failure scenarios as appropriate for its site-specific environmental and operating circumstances, including the following,

- Catastrophic release of hydrogen cyanide (HCN) from storage or process facilities
- Transportation accidents
- Releases during unloading and mixing
- Releases during fires and explosions
- Pipe, valve and tank ruptures
- Overtopping of ponds and impoundments
- Power outages and pump failures
- Uncontrolled seepage
- Failure of cyanide treatment, destruction or recovery systems

- Failure of tailings impoundments, and other cyanide facilities

The response to these events is captured within the emergency response plan the rapid response procedures and the TSF operations manual

Planning by NTO for the response to transport related emergencies has been limited to on-site emergencies and transport incidents on the access road. This is captured within their Cyanide transportation incident (on lease) procedure.

The only potential exposure that communities face is a transport related incident. NTO engages Orica to transport their cyanide to site, either in the form of solid NaCN briquettes (which is being phased out) or as a liquid in Isotainers. Orica is deemed responsible for the response to an incident between the supply depot and NTO, ensuring that the route taken is appropriate. Orica is a certified cyanide transportation company. If the incident is off-lease, NTO will assist in the event that Orica requests assistance. Orica has an Emergency Response Guide which details their controls.

**Standard of Practice 7.2**

Involve site personnel and stakeholders in the planning process.

in full compliance with

The operation is  in substantial compliance with Standard of Practice 7.2

not in compliance with

**Basis for this Finding/Deficiencies Identified:**

Newmont Tanami Operations (NTO) is in FULL COMPLIANCE with Standard of Practice 7.2.

NTO has involved its workforce and stakeholders, including potentially affected communities, in the cyanide emergency response planning process, with the purpose of ensuring awareness and keeping the plan current and applicable.

In terms of nearby community stakeholders, there are Four Traditional Owner (TO) communities, the closest being 260km and two stations, 60 and 150 km away. As such, the most likely scenario is via cyanide transport interaction. NTO engages Orica to transport their cyanide to site, either in the form of solid NaCN briquettes (which is being phased out) or as a liquid in Isotainers. Orica is deemed responsible for the response to an incident between the supply depot and NTO, ensuring that the route taken is appropriate. Orica is a certified as being compliant with the code.

Involving of communities in the planning process involves the use of meetings with community representatives and involvement of workers employed from the local communities.

The main avenue for workforce involvement in emergency response planning is through participation in the Emergency Response Team (ERT), which is drawn from employees across departments and functional areas. Safety issues are also discussed during daily pre-start meetings; Health Safety Environment and Community (HSEC) committee meetings (monthly); Major Hazard Facility (MHF) risk reviews (quarterly) and the site-wide general risk reviews (annually).

Following all events or mock drills, there is a debrief and lessons learned exercise which has as its key focus, the improvement of the emergency response plan.

Because of its remoteness, no external services have direct involvement in emergency response, at Tanami events. These are handled internally by NTO with support from Corporate and Orica.

RFDS and Alice Springs Hospital have role in evacuating and stabilising injured persons.

Letters have been sent to both the RFDS and Alice Springs Hospital, advising of potential need to treat workers for CN exposure.

### **Standard of Practice 7.3**

Designate appropriate personnel and commit necessary equipment and resources for emergency response.

in full compliance with

The operation is  in substantial compliance with Standard of Practice 7.3

not in compliance with

### **Basis for this Finding/Deficiencies Identified:**

Newmont Tanami Operations (NTO) are in FULL COMPLIANCE with Standard of Practice 7.3.

NTO's Emergency Management Plan and Emergency Response plan provides the plan for emergency response. These are supported by the Rapid Response System which includes all processes for designating and directing ERT. Roles of ERT team members including responsibilities and authority, and in specific the allocation of suitable resources is described in Rapid Response.



Elements of the NTO’s emergency management plan and cyanide emergency response plan, procedures and rapid response:

- Designate primary and alternate emergency response coordinators whom have explicit authority to commit the resources necessary to implement the Plan
- Identify Emergency Response Teams
- Require appropriate training for emergency responders
- Include call-out procedures and 24-hour contact information for the coordinators and response team members
- Specify the duties and responsibilities of the coordinators and team members
- List emergency response equipment, including personal protection gear, available along transportation routes and/or on-site
- Include procedures to inspect emergency response equipment to ensure its availability
- Describe the role of outside responders, medical facilities and communities in the emergency response procedures

Given the remote nature of the site outside entities are largely self-sufficient with respect to emergency response. The following assistance is likely to be required

- Hospital care
- Transport to hospital and
- Medical advice.

These are managed via communication and or contracts.

Letters have been sent to both the RFDS and Alice Springs Hospital informing them of the nature of their potential involvement and there is a contract is in place with an organisation to provide medical services including 7 day a week, 24 hour access to a doctor

**Standard of Practice 7.4**

Develop procedures for internal and external emergency notification and reporting.

in full compliance with

The operation is  in substantial compliance with Standard of Practice 7.4

not in compliance with

**Basis for this Finding/Deficiencies Identified:**

Newmont Tanami Operations (NTO) is in FULL COMPLIANCE with Standard of Practice 7.4.

Notification of an emergency is captured within the Emergency Response Plan (ERP) and the Emergency Management Plan (EMP). Contact details for site management and personnel and the external agencies are captured within these documents. Additional information and procedures for notification are included in the Rapid Response system. Additionally, the Duty ERT Leader has a phone with emergency contact numbers entered.

Due to the remote location of the site, no communities are deemed to be affected. However, if the need arises this would be conducted in accordance with the EMP and ERP.

Procedures for communicating with the media is included within the Rapid Response System.

**Standard of Practice 7.5**

Incorporate into response plans and remediation measures monitoring elements that account for the additional hazards of using cyanide treatment chemicals.

in full compliance with

The operation is  in substantial compliance with Standard of Practice 7.5

not in compliance with

**Basis for this Finding/Deficiencies Identified:**

Newmont Tanami Operations (NTO) is in FULL COMPLIANCE with Standard of Practice 7.5.

The ERP and associated response guidelines outline how to neutralise, recover and decontaminate spill residues. In particular it suggests that the strategy for clean-up and neutralisation is in accordance with the SDS and or the supplier's instruction. This is supported by the rapid response system and particular procedures including but not limited to:

- The Handling a Cyanide Spill Procedure
- Decontamination of cyanide equipment task procedure

Together, these cover:

- Recovery or neutralisation of solutions or solids?
- Decontamination of soils or other contaminated media?
- Management and/or disposal of spill clean-up debris?

There are no surface water bodies near site that may be affected by a cyanide spill. Water is provided on site through a piped system from the site Reverse Osmosis (RO) plant and cannot be contaminated by a spill. As such, there is no need for the provision of an alternate drinking water supply

The emergency response plan requires the management of any releases via dilution and or neutralisation. The responsibility to ensure the management has been appropriate and that the levels are acceptable lies with the environmental department and requires the testing, analysis and decision making based on this data.

The system suggests that Neutralisation should only be considered as an item of last resort and that every effort to recover all spillage and transfer to the grinding circuit should be made first. The system clearly states that Sulphate, Sodium Hypochlorite or Hydrogen Peroxide is not to be used in or near any natural surface water. It is a requirement to consult with the Environmental Department before using any neutralising agents.

The NTO Handling a Cyanide Spill Procedure suggests that the treatment chemical is Ferrous sulphate and specifies its location (Located in the container next to the carbon shed). It suggests that ferrous sulphate is added at a ratio of 400g per litre of 30%wt cyanide solution. It also suggests that confirming successful remediation analysis is done by the environmental team following analysis in an onsite laboratory in accordance with NTO-MIL-PR-706519 Analysis for cyanide utilising Merckoquaint cyanide test kit. The final concentration allowed in residual soil is 0.5ppm WAD

The emergency response plan requires the management of any releases via dilution and or neutralisation. The responsibility to ensure the management has been appropriate and that the levels are acceptable lies with the environmental department and requires the testing, analysis and decision making based on this data

**Standard of Practice 7.6**

Periodically evaluate response procedures and capabilities and revise them as needed.

in full compliance with

The operation is  in substantial compliance with Standard of Practice 7.6

not in compliance with

**Basis for this Finding/Deficiencies Identified:**

Newmont Tanami Operations (NTO) is in FULL COMPLIANCE with Standard of Practice 7.6.

The emergency response plan and the emergency management plan are reviewed on a 2 yearly and annual basis respectively. This ensures suitability and effectiveness.

In addition to this, Mock emergency drills are conducted periodically to test response procedures for various cyanide exposure scenarios, and lessons learned from the drills are incorporated into response planning.

Cyanide related drills are planned and conducted regularly annually and hazardous materials mock drills once a year. In addition to this, there is evidence of the scheduling and conduct of mill evacuations at least 2 times a year,

Drill reports were available to record that demonstrated the success or otherwise of the drill response and there was evidence of lessons learned being fed into the continuous improvement cycle. Drill records are maintained in Cintillate along with evidence of associated action.

The site has an Emergency Response Team. Training is scheduled regularly, and part of the training includes practicing response to potential events. This also provides an opportunity to evaluate the ERP.

No cyanide incidents have occurred at NTO which have required implementation of the ERP. Therefore, no revision of EMP or other procedures possible arising from CN incidents. However, the EMP has a requirement for debriefing and incident investigation following all emergency response events.

## PRINCIPLE 8 – TRAINING

**Train workers and emergency response personnel to manage cyanide in a safe and environmentally protective manner.**

### Standard of Practice 8.1

Train workers to understand the hazards associated with cyanide use.

in full compliance with

The operation is  in substantial compliance with Standard of Practice 8.1

not in compliance with

### Basis for this Finding/Deficiencies Identified:

Newmont Tanami Operations (NTO) is in FULL COMPLIANCE with Standard of Practice 8.1.

NTO provides cyanide hazard recognition training to all personnel who may encounter cyanide.

NTO personnel and contractors complete the following as appropriate:

- The General Induction which includes general information on hazardous materials, including cyanide
- The On-Line Mill Induction. The Induction includes information on the hazards of cyanide, including use of cyanide at NTO, symptoms of exposure, protections for use of cyanide and response to a cyanide incident.
- Chemical Awareness Training.
- Cyanide training course
- Specific induction package for shutdowns This presentation contains appropriate cyanide related content.
- Risk management training included JHA / Safe-check training and JHA authoriser training.

NTO conducts refresher training for cyanide hazard recognition including:

- The General Induction every 5 years
- Chemical Awareness Training every 5 years
- Cyanide training course every 2 years

If personnel leave the site for more than 12 months they are required to re-do all training upon return to site.

Records sighted demonstrated compliance with the NTO system

Records of training are held both electronically and in hard copy. Electronic records are maintained in an electronic database, Intuition and in electronic personnel files. Hard copy records are maintained in physical personnel files, and archived in archive boxes in chronological order. Records are maintained until 10 years after the worker has left the business.

### **Standard of Practice 8.2**

Train appropriate personnel to operate the facility according to systems and procedures that protect human health, the community and the environment.

in full compliance with

The operation is  in substantial compliance with Standard of Practice 8.2

not in compliance with

### **Basis for this Finding/Deficiencies Identified:**

Newmont Tanami Operations (NTO) is in FULL COMPLIANCE with Standard of Practice 8.2.

Aside from formal inductions containing cyanide related information and cyanide awareness training, the other primary training mechanism for workers in their normal tasks is on the job training utilising the standard operating procedures (SOPs). This involves a theory component, a practical on the job component and both a practical assessment and a questionnaire. An example of packages include milling and grinding, Leach, handling reagents, thickening, process control room etc.

The SOPs capture the controls to ensure the protection of humans, the community and the environment. The training is provided to site workers is based on these procedures and therefore captures the appropriate controls.

The records controlling this training is an Individual Training Plan and a training log sheet. The employee is then required to log training hours under the supervision of an experienced employee. Following sufficient hours and on the advice of the trainee's supervisor, they are assessed using both written and practical means and signed off by a suitably qualified person.

In addition to this there is high risk training conducted including but not limited to working at heights, forklift operations, crane operations, confined space entry etc.

All records of such training are forwarded to the Training Department. Each employee has their own folder, kept by the Training Department, which records the training they have undertaken. The records include the procedure for which training was conducted, a written assessment and a practical assessment. The records are signed by the person being trained, the assessor and the content expert. Training records sighted demonstrated competence.

Appropriately qualified personnel conduct the training on site related to cyanide management activities. New process employees are teamed up with experienced personnel. These trainees are assessed by the experienced personnel and signed off as competent. All trainers are required to have completed their Certificate IV in Training and Assessment. Where trainers have limited experience in the process plant, they utilise subject matter experts.

Employees are trained prior to working with cyanide through an induction and on-the-job training process.

Refresher training on cyanide management is provided to ensure that employees continue to perform their jobs in a safe and environmentally protective manner.

Refresher training for cyanide includes:

- Cyanide Awareness Training– every 2 years.
- Mill Induction – every 5 years.
- General Induction – every 5 years.
- Chemical Awareness Training – every 5 years.

Records are retained throughout an individual's employment documenting the training they receive. The records apply to formal training provided by the Training Department and include the names of the employee and the trainer, the date of training, the topics covered, and if the employee demonstrated an understanding of the training materials. Records are maintained until 10 years after the worker has left the business.

### **Standard of Practice 8.3**

Train appropriate workers and personnel to respond to worker exposures and environmental releases of cyanide.

in full compliance with

The operation is  in substantial compliance with Standard of Practice 8.3

not in compliance with

**Basis for this Finding/Deficiencies Identified:**

Newmont Tanami Operations (NTO) is in FULL COMPLIANCE with Standard of Practice 8.3.

All personnel are trained in the procedures to be followed if cyanide is released. This is covered within the general induction, the mill induction, cyanide awareness training and in the on the job procedures based standard operating procedures including the Handling a Concentrated Cyanide Spill procedure.

Site emergency response personnel, including unloading, mixing, production, environment and maintenance workers are trained in decontamination and first aid procedures. This training involves formalised Certificate II training, procedural training and certificated first aid training. In support of this, all site emergency responders take part in routine drills to test and improve their response skills.

The paramedics are all qualified paramedics; one to degree level, 2 to diploma level and 1 to Certificate IV level. In addition to this, all emergency responders undertake formalised training that leads to a Certificate II qualification. Supporting this is specific qualification-based training in hazardous materials, use of breathing apparatus, rope rescue, first aid etc.

In addition to this, training is delivered on a weekly basis (every Saturday) by the Emergency Response Coordinators, this is based on particular events and includes a classroom component and a practical component. This training is designed around the procedures within the Emergency response plan and related systems eg rapid response. A key aspect of this is the maintenance, inspection and use of the response equipment.

Formalised HAZMAT training is conducted at least twice a year.

All employees and long-term contractors are required to undergo a cyanide refresher training course every 2 years.

NTO's operations are located in a remote area with no nearby communities, local responders or medical providers who may be involved in the site's emergency response measures.

NTO has written to the Royal Flying Doctor Service and the main public hospitals in Alice Springs and Darwin advising of NTO's use of cyanide and the potential requirement for treatment of workers exposed to cyanide.

Simulated cyanide emergency drills are conducted periodically for training purposes. They cover both worker exposure and environmental release scenarios.



Cyanide related drills are planned and conducted regularly annually. In addition to this, there is evidence of the scheduling and conduct of mill evacuations at least 2 times a year and HAZMAT drills at least once a year.

Drill reports were available to record that demonstrated the success or otherwise of the drill response and there was evidence of lessons learned being fed into the continuous improvement cycle. Drill records are maintained in Cintillate along with evidence of associated action.

Training records demonstrate competence and compliance with requirements. Records are maintained until 10 years after the worker has left the business

## PRINCIPLE 9 – DIALOGUE

### Engage in public consultation and disclosure.

#### Standard of Practice 9.1

Provide stakeholders the opportunity to communicate issues of concern.

in full compliance with

The operation is  in substantial compliance with Standard of Practice 9.1

not in compliance with

#### **Basis for this Finding/Deficiencies Identified:**

Newmont Tanami Operations (NTO) is in FULL COMPLIANCE with Standard of Practice 9.1.

In terms of community stakeholders, there are Four Traditional Owner (TO) communities the closest being 260km away and two stations, one 60km and one 150km away. The most likely scenario is via cyanide transport interaction.

Stakeholder engagement and management is driven by the Social impact assessment. The key operational documents in use in this context is the Newmont social responsibility commitment and sustainability and stakeholder engagement policy and related corporate documents. These together with the social impact assessment drive the stakeholder communication and consultation process which includes but is not limited to:

- Tanami traditional owner liaison committee (TOLC) meetings
- Tanami desert 10 year plan steering committee meeting
- Stakeholder communication log
- Community poster- Cyanide
- Cross cultural awareness training
- Australian regional S & ER leadership meeting (Monthly)
- Having the "YAPA" team available for communication with community members (Front gate interactions)
- NTO External Complaints Procedure

The components listed above and the access to the front gate for interactions are the mechanisms whereby stakeholders are able to communicate issues of concern regarding the management of cyanide.

Records of communication was found to be recorded within the Cintillate system.

### **Standard of Practice 9.2**

Initiate dialogue describing cyanide management procedures and responsively address identified concerns.

in full compliance with

The operation is  in substantial compliance with Standard of Practice 9.2

not in compliance with

### **Basis for this Finding/Deficiencies Identified:**

Newmont Tanami Operations (NTO) is in FULL COMPLIANCE with Standard of Practice 9.2.

In terms of community stakeholders, there are Four Traditional Owner (TO) communities the closest being 260km away and two stations, one 60km and one 150km away. The most likely scenario is via cyanide transport interaction.

Stakeholder engagement and management is driven by the Social impact assessment. The key operational documents in use in this context is the Newmont social responsibility commitment and sustainability and stakeholder engagement policy and related corporate documents. These together with the social impact assessment drive the stakeholder communication and consultation process which includes but is not limited to:

- Tanami traditional owner liaison committee (TOLC) meetings
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- Stakeholder communication log
- Community poster- Cyanide
- Cross cultural awareness training
- Australian regional S & ER leadership meeting (Monthly)
- Having the "YAPA" team available for communication with community members (Front gate interactions)
- NTO External Complaints Procedure

The meetings listed above, the posting of the cyanide poster in locations where the communities access, and the access to the front gate for interactions are the mechanisms whereby the operation is able to provide stakeholders with information regarding cyanide management practices and procedure.

Records of communication was found to be recorded within the Cintillate system and evidence sighted demonstrated that minutes of meetings were maintained.

**Standard of Practice 9.3**

Make appropriate operational and environmental information regarding cyanide available to stakeholders.

The operation is  in full compliance with Standard of Practice 9.3  
 in substantial compliance with  
 not in compliance with

**Basis for this Finding/Deficiencies Identified:**

Newmont Tanami Operations (NTO) is in FULL COMPLIANCE with Standard of Practice 9.3. Mining Management Plan describes in detail CN management. This is publicly available on the Department of Primary Industry and Resources' (DPIR) website. This is approved by the Central Land Council (CLC) the representative of the traditional owners. The mining management plan is approved by the regulator and one of the conditions under the act is that the operator releases a public report of their activities. This include CN incidents. These reports are publicly available on the regulator's website.

A Cyanide Poster has been developed and is displayed on notice boards around the communities (e.g. shops, community organisations, schools). The poster includes what CN is and why it is used, safe transport and use including training, CN code compliance, spills.

NTO has developed a cyanide information presentation and a cyanide information sheet. This was found to be presented and distributed at meeting.

NTO do disseminated information in written form as well as verbal and pictorial form. NTO have a team of workers from the local communities who have the local language skill capability. This team is used to ensure effective communication including attending the front gate to manage interactions.

NTO utilise meetings extensively for communication. Presentations assessed by the auditor demonstrated significant and effective use of pictures and diagrams.

Newmont generate and make publicly available on an annual basis "Beyond the Mine" social and environmental performance annual report. These are available publicly via the Newmont website. The Beyond the Mine report includes the high level incidents (level 3) which includes:

- a) Cyanide exposure resulting in hospitalization or fatality
- b) Cyanide releases off the mine site requiring response or remediation
- c) Cyanide releases on or off the mine site resulting in significant adverse effects to health or the environment
- d) Cyanide releases on or off the mine site requiring reporting under applicable regulations
- e) Releases that are or that cause applicable limits for cyanide to be exceeded