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Newmont Boddington Gold Pty Ltd – Boddington Gold Mine

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International Cyanide Management Code
Gold Mining Operations

ICMI SUMMARY AUDIT REPORT
NEWMONT AUSTRALIA - BODDINGTON GOLD MINE

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ICMI SUMMARY AUDIT REPORT
NEWMONT AUSTRALIA - BODDINGTON GOLD MINE

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Ramboll
Level 7
41 St Georges Terrace
Perth
Western Australia 6000
Australia

T +61 8 9225 5199
https://ramboll.com

Ramboll Australia Pty Ltd.
ACN 095 437 442
ABN 49 095 437 442

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SUMMARY AUDIT REPORT

Name of Mine
Boddington Gold Mine

Name of Mine Owner
Newmont Boddington Gold Pty Ltd

Name of Mine Operator
Newmont Boddington Gold Pty Ltd

Name of Responsible Manager
Jen Stewart, Process Operations Acting Manager

Address
[Office]
Level 2, 388 Hay St
Subiaco, WA 6008

[Mine Site]
Boddington Gold Mine
Gold Mine Road
Boddington, WA 6390

Contact Information
Telephone: +61 8 9883 3232
Email: Jen.Stewart@newmont.com

Location Detail and Description of Operation
Newmont Boddington Gold Mine (NGB) operations include the processing and tailings facilities located near the town of Boddington approximately 120km south-east of Perth, Western Australia. Cyanide facilities include storage, processing, cyanide destruct circuit, the tailings pipeline, and the tailings storage facilities.

The operation was initially constructed in the 1980's with first production of the oxide deposit in 1987. The current expanded operation commenced construction in 2006 with commercial production of the basement rock deposits achieved in November 2009. This expansion involved installation of considerable new plant, refurbishment of existing infrastructure and construction of a new Residue Disposal Area (RDA)(tailings dam).

The process plant includes a flotation circuit, where a gold rich copper concentrate is produced and trucked to the Bunbury Port facility for shipment. Tailings from cleaner flotation enter the cleaner scavenger tails leach circuit where cyanide is added to leach gold from the slurry mix. The leach residue combines with the scavenger tailings from the rougher/scavenger flotation circuit and is fed to the two parallel carbon-in-leach (CIL) trains and sodium cyanide is added to extract gold from the slurry mix. Each CIL train has a Residue Surge Tank that pumps tailings to the Booster Station at the RDA where Caro's acid is added (mixture of Hydrogen Peroxide and Sulphuric Acid) to reduce cyanide levels before it is distributed for disposal to the RDA. Return water from the RDA is further treated to reduce Weak Acid Dissociable Cyanide (WAD CN) levels to <1.5 ppm prior to transport to the process water pond and process water tank were WAD CN levels are reduced to <0.5 ppm prior to process water distribution.

Auditors Finding
The Operation is:

☒ IN FULL COMPLIANCE

☐ IN SUBSTANTIAL COMPLIANCE

☐ NOT IN COMPLIANCE

With the International Cyanide Management Code. The operation has not experienced any compliance issues or significant cyanide incidents during the previous three-year audit cycle.

Audit Company
Ramboll Australia Pty Ltd
Level 7
41 St Georges Terrace
Perth, WA, 6000
Australia

Telephone: +61 8 9225 5199
Web: https://ramboll.com/

Date(s) of Audit
The site audit was conducted inclusive of the 28th September to 1st October 2021

Lead Auditor and Technical Specialist – John Miragliotta (jmiragliotta@ramboll.com)

22nd December 2021

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 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.

The operation is

- ☒ IN FULL COMPLIANCE
- ☐ IN SUBSTANTIAL COMPLIANCE with Standard of Practice 1.1.
- ☐ NOT IN COMPLIANCE

Newmont Boddington Gold (NBG) is in FULL COMPLIANCE with Standard of Practice 1.1. requiring the operation to 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.

Cyanide purchased by NBG is purchased from Australian Gold Reagents Pty Ltd (AGR) under a Contract of Supply which was in place throughout the period of certification. The contract requires AGR to conform to the requirements of the ICMC. AGR was recertified with the International Cyanide Management Code (ICMC) on 22 September 2020.

PRINCIPLE 2 – TRANSPORTATION

Protect communities and the environment during cyanide transport.

Standard of Practice 2.1
Require that cyanide is safely managed through the entire transportation and delivery process from the production facility to the mine by use of certified transport with clear lines of responsibility for safety, security, release prevention, training and emergency response.

The operation is

- ☒ IN FULL COMPLIANCE
- ☐ IN SUBSTANTIAL COMPLIANCE with Standard of Practice 2.1.
- ☐ NOT IN COMPLIANCE

NBG is in FULL COMPLIANCE with Standard of Practice 2.1, requiring that cyanide is safely managed through the entire transportation and delivery process from the production facility to the mine by use of certified transport with clear lines of responsibility for safety, security, release prevention, training and emergency response.

The operation maintains chain of custody records for all deliveries of cyanide which identifies the transporters and supply chains from AGR's Kwinana production facility to NBG. These records confirm that all cyanide transported to the operation was undertaken by Qube Bulk Pty Ltd which is included in AGR's certified compliant supply chain and is certified compliant as a cyanide transporter by the International Cyanide Management Institute (ICMI).

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.

The operation is

- ☒ IN FULL COMPLIANCE
- ☐ IN SUBSTANTIAL COMPLIANCE with Standard of Practice 3.1.
- ☐ NOT IN COMPLIANCE

NBG is in FULL COMPLIANCE with Handling and Storage Practice 3.1, requiring that cyanide handling and storage facilities are designed and constructed consistent with sound, accepted engineering practices, quality assurance/quality control (QA/QC) procedures, spill prevention and spill containment measures.

The cyanide unloading and storage facility was designed and constructed to meet the applicable legal requirements, the cyanide producer's guidelines and the relevant engineering standards. No modifications have been made to the facility since the previous certification. The facility is regularly inspected by the cyanide producer and its condition is assessed against the relevant guidelines, legal requirements and engineering standards.

Unloading and storage areas for liquid cyanide are located away from people and surface waters. Liquid cyanide is unloaded on a concrete surface that minimises seepage to the subsurface. The cyanide unloading area is designed and constructed to contain, recover or allow remediation of any leakage from the tanker truck.

The cyanide unloading facility consists of a concrete pad that grades toward the concreted intermediate secondary containment bund of the cyanide storage tank which will overflow to a HDPE-lined secondary containment pond if the concrete intermediate bund overtops. Cyanide is stored separately from incompatible materials with berms, bunds, walls or other appropriate barriers that will prevent mixing.

The cyanide storage tank levels are controlled by automated systems that include high level indicators that alarm and interlock to stop unloading if triggered. The high-level indicators and interlocks are regularly tested. The storage tank is situated on a concrete ring beam foundation that has a High Density Poly Ethylene (HDPE) liner on geotextile and is situated within a secondary containment area that contains HDPE lined concrete which are sufficient to prevent the seepage from the cyanide storage tank to the subsurface.

The cyanide storage tank is located externally with adequate ventilation to prevent build-up of hydrogen gas and includes an engineered tank vent arrangement. The cyanide storage tank has adequate ventilation to prevent build-up of hydrogen gas. The cyanide storage tank is located within the fenced boundary of plant and within locked fenced compound and has sufficient separation from incompatible chemicals.

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.

The operation is
- ☒ IN FULL COMPLIANCE
- ☐ IN SUBSTANTIAL COMPLIANCE with Standard of Practice 3.2.
- ☐ NOT IN COMPLIANCE

The operation is in FULL COMPLIANCE with Standard of Practice 3.2. requiring NBG to 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.

All cyanide is delivered by road to NBG as liquid sodium cyanide in isotainers which are returned to the cyanide supplier immediately after the unloading is completed. Prior to the cyanide delivery truck exiting the unloading pad, the isotainer is externally washed, if necessary, to remove any residue from unloading hose connection and couplings on the isotainers NBG has developed and implemented procedures to prevent exposures and releases during cyanide unloading activities including procedures for operation and maintenance of cyanide unloading equipment, spill response procedures for timely clean up, use of personnel protective equipment and supervision of cyanide unloading. NBG requires that colorant dye is included in the liquid NaCN that is delivered to the operation

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 including contingency planning and inspection and preventive maintenance procedures.

The operation is

- ☒ IN FULL COMPLIANCE
- ☐ IN SUBSTANTIAL COMPLIANCE with Standard of Practice 4.1.
- ☐ NOT IN COMPLIANCE

The operation is in FULL COMPLIANCE with Standard of Practice 4.1 for the implementation of management and operating systems designed to protect human health and the environment including contingency planning and inspection and preventative maintenance procedures.

NBG has developed written operating manuals, plans, procedures and work instructions for all cyanide facilities including cyanide unloading and storage, cyanide processing, residue/tailings treatment and disposal. The operational manuals, plans, procedures and work instructions account for the assumptions and parameters on which the facility was based and specific regulatory requirements to prevent and control cyanide releases and exposures. These include process water operating plans with criteria and monitoring of process water storage facilities and residue disposal areas; maintenance of process water ponds to ensure design containment volumes are maintained; instructions for deposition and monitoring of residue disposal areas to ensure minimum freeboard maintained; measures to ensure that the cyanide destruction at the booster tank discharge is maintained to achieve regulatory limits, and; operational set points on automated reagent additions within the process plant to ensure optimization of cyanide use and maintenance of pH levels that minimise the risk of HCN generation. The NBG operational control documentation describes the standard practices required for safe and environmentally sound operations needed for compliance with the Code including water management plans, inspections of cyanide facilities and equipment, and preventative maintenance activities.

NBG has implemented its Change Management Procedure and Change Management System (CMS) to review proposed changes to production process, operating practices and cyanide facilities to determine if they may increase the potential for cyanide release or worker exposure. The change management processes at NBG identify the need, where necessary, for additional measures to protect worker health and safety and the environment from assessed changes and include the requirement for health, safety and environment personnel to review and approve changes.

NBG has developed formal cyanide management documents that address contingency procedures for situations when inspections and monitoring identify a deviation from design or standard operating procedures and/or when a temporary closure or cessation of the operation may be necessary.

NBG undertake the inspections of cyanide facilities at unloading, storage, processing and tailings/residue areas. These include inspections of cyanide tanks; secondary containments for cyanide tanks; leak detections systems; pipelines, pumps and valves; ponds and impoundments including drainage systems.

NBG inspects cyanide facilities on a frequency that is sufficient to ensure and document its function within design parameters.

NBG has retained electronic records and/or in hard copy, of inspections over the period of certification. These inspection records include documentation of the name of the inspector, the date of inspection, and observed deficiencies. Corrective actions to address deficiencies are documented in preventative maintenance work orders and in the action tracking registers, including NBG's electronic information management system.

NBG implements preventative maintenance programs and maintains records of completed preventative maintenance activities for cyanide equipment and facilities within the management system.

NBG does not require emergency power resources to operate pumps and other equipment to prevent unintentional releases and exposures in the event its primary source of power is interrupted. The design of the plant in relation to the cyanide code incorporates full secondary containment of all potential releases from processes or pipelines containing cyanide.

Standard of Practice 4.2
Introduce management and operating systems to minimise cyanide use, thereby limiting concentrations of cyanide in mill tailings.

The operation is

- ☒ IN FULL COMPLIANCE
- ☐ IN SUBSTANTIAL COMPLIANCE with Standard of Practice 4.2.
- ☐ NOT IN COMPLIANCE

The operation is in FULL COMPLIANCE with Standard of Practice 4.2. requiring implementation of a program to evaluate cyanide use in the mill and adjust the addition rate to minimise its use. NBG undertakes metallurgical test programs and process monitoring to optimize appropriate cyanide addition rates in the process plant. NBG undertakes metallurgical testwork programs on future ores to inform ongoing process strategies for ore treatment including assessment of changes to cyanide addition rates and potential impacts to cyanide management strategies.

Standard of Practice 4.3
Implement a comprehensive water management program to protect against unintentional releases.

The operation is

- ☒ IN FULL COMPLIANCE
- ☐ IN SUBSTANTIAL COMPLIANCE with Standard of Practice 4.3.
- ☐ NOT IN COMPLIANCE

The operation is in FULL COMPLIANCE with Standard of Practice 4.3.

The comprehensive and probabilistic water balance is implemented using a model designed for the site that applies an industry standard modelling tool. The model is run on a regular basis to allow for the successful estimation of water movements and avoidance of overtopping of ponds

and tailings storage facilities. Model input data, including site specific weather data is regularly updated.

The mine Water Balance considers appropriate input parameters including:

- The tailings deposition rates
- An adopted storm event
- Measured precipitation and evaporation rates which is supplemented with rainfall data from surrounding weather stations
- Solution losses due to decant, entrainment, underdrainage, toe wells, beach drains and seepage
- A power outage coinciding with a design storm event
- Water that is re-used at the plant

The mine's 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.

Ponds and impoundments are designed and operated with adequate freeboard above the maximum design storage capacity determined to be necessary from water balance calculations and by regulatory requirements.

Standard of Practice 4.4
Implement measures to protect birds, other wildlife and livestock from adverse effects of cyanide process solutions.

The operation is	☒ IN FULL COMPLIANCE	
	☐ IN SUBSTANTIAL COMPLIANCE with	Standard of Practice 4.4.
	☐ NOT IN COMPLIANCE	

The operation is in FULL COMPLIANCE with Standard of Practice 4.4.

There are no open water bodies that exceed 50 mg/L WAD CN at NBG and therefore fencing or other measures to restrict access by wildlife and livestock to open waters is not required.

The operation can demonstrate that the cyanide concentration in all open water including residue disposal areas, process water pond and the CIL containment pond do not exceed 50 mg/L WAD cyanide. The facility does not have leach facilities.

All three open water bodies with potential to contain cyanide greater than 50 mg/L WAD cyanide are included in the monthly environmental monitoring suite, as well as daily monitoring conducted by the Processing Department. Compliance monitoring of the residue discharge from the cyanide destruction tank is undertaken twice daily.

In addition to the daily and monthly monitoring and laboratory analysis, online WAD CN analysers take automatic samples every 15 minutes at the inlet and outlet from the residue cyanide destruction tank and the inlet and outlet from the residue decant cyanide destruction process which returns water to the process plant. Any exceedance of target levels from online WAD CN analysers will trigger alarms for the Booster Station operators who are required to follow documented response actions to reduce WAD CN of the discharge. For the results observed over the period of certification, the site was achieving this target the majority of the time.

Maintaining a WAD cyanide concentration of 50 mg/L or less in open water is effective in preventing significant wildlife mortality at NBG. Daily inspections of the residue disposal area and other open water ponds include wildlife observations undertaken by process personnel in addition to the monthly inspections undertaken by environment department at NBG. During the audit period there have been no recorded cyanide related wildlife mortalities at the site.

Standard of Practice 4.5
Implement measures to protect fish and wildlife from direct and indirect discharges of cyanide process solutions to surface water.

The operation is
- ☒ IN FULL COMPLIANCE
- ☐ IN SUBSTANTIAL COMPLIANCE with Standard of Practice 4.5.
- ☐ NOT IN COMPLIANCE

The operation is in FULL COMPLIANCE with Standard of Practice 4.5.

The operation does not have direct surface water discharge and there is no evidence of indirect discharge to surface water. The operation has an overall negative water balance and is located in the catchment of 34 Mile Brook, a tributary of the Hotham River which is approximately 800m away from the process plant. The operation undertakes monitoring of these surface waters to verify that there is no discharge to these systems.

Standard of Practice 4.6
Implement measures designed to manage seepage from cyanide facilities to protect the beneficial uses of ground water.

The operation is
- ☒ IN FULL COMPLIANCE
- ☐ IN SUBSTANTIAL COMPLIANCE with Standard of Practice 4.6.
- ☐ NOT IN COMPLIANCE

The operation is in FULL COMPLIANCE with Standard of Practice 4.6. requiring it to implement measures designed to manage seepage from cyanide facilities to protect the beneficial uses of groundwater.

NBG implements water management measures to manage potential seepage to protect groundwater beneath and immediately downgradient of the operation. These include seepage protection measures such as underdrainage collection systems and leak detection and recovery systems installed at the residue disposal area decant ponds and process water ponds. Other than the NBG process plant, there are no beneficial uses of groundwater in the vicinity of the operation. NBG has groundwater compliance targets for WAD CN concentrations at specific monitoring bores set through its operating license.

The operation monitors groundwater on the site with records over the last 3 years demonstrating that all compliance and additional bores detect WAD CN less than the 0.5 mg/L licence target concentration.

Standard of Practice 4.7
Provide spill prevention or containment measures for process tanks and pipelines.

The operation is	☒ IN FULL COMPLIANCE	
	☐ IN SUBSTANTIAL COMPLIANCE with	Standard of Practice 4.7.
	☐ NOT IN COMPLIANCE	

The operation is in FULL COMPLIANCE with Standard of Practice 4.7.

Spill prevention or containment measures are provided for all cyanide unloading, storage and process solution tanks. The storage and process tanks have been designed and constructed such that they sit on a concrete ring beam with compacted fill in the centre and covering layers of either concrete, HDPE liner or geotextile liner to prevent potential leakage from migrating to the subsurface.

Concentrated cyanide solution pipelines are all within secondary containment trays where they traverse outside a bunded area. 'Tell-tale' pipes drain any fluid within the containment tray (that may have arisen from a leak of the primary pipe) into concrete bunding. Inspections are conducted to detect leaks in the bunding.

The final tailings slurry and decant return pipelines are situated within an earth bunded corridor, with bitumen and cement stabilisation measures applied to prevent erosion. Residue catch-pits are located in the low points along the corridor. Catchpits are monitored with closed-circuit television (CCTV) cameras and cleaned-out should a spill occur.

Secondary containments for cyanide unloading, storage and process tanks are 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. The storage tank is in a concrete bunded area, the volume of which is greater than 100% of the storage tank volume plus a nominated rainfall event. The bunding surrounding the leach and adsorption tanks and the Carbon in Leach(CIL) containment pond is capable of storing the volume of the largest tank plus a nominated rainfall event.

Procedures are in place and being implemented to prevent discharge to the environment of cyanide solution or cyanide contaminated waters that are collected in the secondary containment areas. Secondary containment areas have been built with dedicated sump pumps and piping to redirect all such water back into the processing plant for reuse.

There are no cyanide process tanks without secondary containment.

Spill prevention or containment measures are provided for all cyanide solution pipelines to collect leaks and prevent releases to the environment.

There are no areas where cyanide pipelines present a risk to surface water. Cyanide tanks and pipelines are constructed of materials compatible with cyanide and high pH conditions.

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.

The operation is

☒ IN FULL COMPLIANCE

☐ IN SUBSTANTIAL COMPLIANCE with Standard of Practice 4.8.

☐ NOT IN COMPLIANCE

The operation is in FULL COMPLIANCE with Standard of Practice 4.8.

Quality assurance and quality control programs have been applied to construction and modification works, addressing the suitability of materials, their fabrication and installation. Quality control and assurance records for cyanide construction and modifications that have occurred have been retained.

Examples examined during the audit covered the construction and substantial modification of the RDA. These works were subject to design review, construction QA/QC and post construction inspection by appropriately qualified persons.

Quality control and quality assurance documentation has been retained on site for the construction of cyanide facilities for the recertification period and since initial certification o the Code.

Standard of Practice 4.9

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

The operation is

☒ IN FULL COMPLIANCE

☐ IN SUBSTANTIAL COMPLIANCE with Standard of Practice 4.9.

☐ NOT IN COMPLIANCE

The operation is in FULL COMPLIANCE with Standard of Practice 4.9. requiring implementation of monitoring programs to evaluate the effects of cyanide use on wildlife, and surface and groundwater quality.

NBG has developed written procedures for monitoring activities as described in its overarching Environmental Monitoring Management Plan. Sampling and analytical protocols have been developed by appropriately qualified personnel. NBG's Environmental monitoring procedures specify how and where samples should be taken, sample preservation techniques, chain of custody procedures, shipping instructions, and cyanide species to be analysed.

The Water Sampling and Monitoring Procedure includes the requirements for quality assurance and quality control. Sampling conditions, including weather, livestock/wildlife activity, anthropogenic influences, etc., and procedures are documented in writing in NBG's monitoring plans.

NBG monitoring is conducted at frequencies adequate to characterise the medium being monitored and to identify changes in a timely manner. Monitoring frequencies are detailed within the Environmental Monitoring Management Plan, and the related Environmental Monitoring Schedule.

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, livestock and the environment.

The operation is

- ☒ IN FULL COMPLIANCE
- ☐ IN SUBSTANTIAL COMPLIANCE with Standard of Practice 5.1.
- ☐ NOT IN COMPLIANCE

The operation is in FULL COMPLIANCE with Standard of Practice 5.1. requiring NBG to plan and implement procedures for effective decommissioning of cyanide facilities to protect human health, wildlife, livestock, and the environment. NBG has developed the Cyanide Facilities Decommissioning Plan which includes an implementation schedule for decommissioning activities. The NBG Cyanide Facilities Decommissioning Plan has been reviewed and updated every three years in accordance with the requirements of the Plan.

Standard of Practice 5.2
Establish a financial assurance mechanism capable of fully funding cyanide related decommissioning activities.

The operation is

- ☒ IN FULL COMPLIANCE
- ☐ IN SUBSTANTIAL COMPLIANCE with Standard of Practice 5.2.
- ☐ NOT IN COMPLIANCE

The operation is in Full Compliance with Standard of Practice 5.2. and establishes a financial assurance mechanism capable of fully funding cyanide-related decommissioning activities. NBG has estimated the cost to fully fund third party implementation of the cyanide-related decommissioning measures in accordance with its Cyanide Facilities Decommissioning Plan. This cost estimate is reviewed and updated at least every five years.

The operation contributes funds to a financial mechanism, the Mining Rehabilitation Fund, which is approved and administered by the Western Australian Department of Mines, Industry Regulation and Safety (DMIRS) for the decommissioning and closure of Boddington Gold Mine, including cyanide related decommissioning activities.

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.

The operation is
- ☒ IN FULL COMPLIANCE
- ☐ IN SUBSTANTIAL COMPLIANCE with Standard of Practice 6.1.
- ☐ NOT IN COMPLIANCE

The operation is in FULL COMPLIANCE with Standard of Practice 6.1. The operation has developed procedures describing cyanide related tasks such as unloading, , plant operations, entry into confined spaces, and equipment decontamination prior to maintenance. In addition to this, there are numerous safe work instructions which describe how work is to be undertaken safely onsite.

The system has a key requirement for risk assessments to be completed for all tasks and jobs. The Australia Pre Task Hazard Assessment Procedure requires that a SafeCheck is conducted prior to commencing the work/task or if a change to the circumstances, conditions or environment introduces additional or new hazards. The questions/prompts on the SafeCheck inform and identify where a more formal process for hazard and control identification is required. These risk processes drive the requirement for the use of PPE. Safe work procedures and job hazard analysis (JHA) require personnel to wear appropriate personal protective equipment (PPE).

Procedures are in place to review proposed process and operational changes and modifications for their potential impacts on worker health and safety and incorporate the necessary worker protection measures.

The operation solicits and actively considers worker input in developing and evaluating health and safety procedures. This was confirmed during the site audit through a review of records and interviews with employees.

When procedures are developed, a review date is selected based on the criticality of the procedure. The review includes checks by the supervisor, employees and approval by the manager. All personnel undergo training in the procedures appropriate for their work area and must be signed-off as competent before they can work without immediate supervision. At this point, personnel are able to raise any queries they have with the procedures. Another method for identifying if a change to a procedure is required is through the appointed Safety Representatives and the monthly site safety committee meeting.

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.

The operation is
- ☒ IN FULL COMPLIANCE
- ☐ IN SUBSTANTIAL COMPLIANCE with Standard of Practice 6.2.

☐ NOT IN COMPLIANCE

The operation is in FULL COMPLIANCE with Standard of Practice 6.2.

The operation has determined the appropriate pH for limiting the evolution of HCN. A pH level of 10.0 or greater is targeted for process solutions.Associated instrumentation is in place to monitor and manage this process.

Where the potential exists for significant cyanide exposure, the operation uses both fixed and personal monitoring devices to confirm that controls are adequate to limit worker exposure to HCN gas.

Standard operating procedure have been developed that outline the actions to be taken if a HCN reading is detected at either 4.7 or 10 ppm. The operation has identified areas and activities where workers may be exposed to cyanide in excess of 10 ppm and require use of PPE in these areas or when performing these activities.

Static monitors operate an orange light with audible alarm when HCN gas levels between 4.7ppm and 10ppm; a red light with audible alarm when >10ppm and a white light with audible alarm indicating a fault with the system. All three modes require immediate evacuation of the work area, restricted access to the area and notification of control room, shift supervisor and Emergency Services.

Portable and fixed HCN monitors are maintained, tested and calibrated as per manufacturer requirements. Calibration records for hydrogen cyanide gas monitors were available for the recertification period (2019-2021) and personnel were aware of the requirement to keep calibration records until the next recertification audit.

Warning signs have been placed in areas identified as being at high risk of being exposed to cyanide. The signs state that cyanide is present, and that smoking, open flame and eating and drinking are not permitted. Signage is present indicating the specific PPE that must be worn when entering the area.The site requires contractually that AGR add colorant dye to sodium cyanide solution prior to it being delivered to site.

Showers, low-pressure eyewash stations and dry-powder fire extinguishers are strategically located throughout the operation in the cyanide areas, and are maintained, inspected and tested on a regular basis.

Unloading, storage, process tanks and piping containing cyanide are identified to alert workers of their contents, and the direction of cyanide flow in pipes designated.

SDS and first aid instructions are available in high-risk processes areas. SDSs are also available online in the chemical management database.

Procedures are in place, to investigate and evaluate cyanide exposure incidents to determine if the operation’s programmes and procedures to protect worker health and safety, and to respond to cyanide exposures, are adequate or need revising. Incident records were reviewed during the audit, which demonstrated significant 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

The operation is ☐ IN SUBSTANTIAL COMPLIANCE with Standard of Practice 6.3.

☐ NOT IN COMPLIANCE

The operation is in FULL COMPLIANCE with Standard of Practice 6.3.

The site inspection indicated that the operation does have water, oxygen, a resuscitator, antidote kits and a radio, telephone and alarm system for communication and readily available for use at cyanide unloading and storage locations.

The operation inspects its first aid equipment regularly to ensure that it is available when needed, and materials are stored and/or tested as directed by their manufacturer. The operation has two cyanide antidote kits that are held in the first aid room at the medical centre on-site. A Cyanokit consists of Hydroxocobolamin antidote and the facility's Registered Paramedics are trained and authorized to administer cyanide antidote in the absence of medical professionals.

The Cyanokits were observed to be in date and inspected on a regular basis, as specified in procedures. The audit found that defibrillation and resuscitation kits were inspected as specified in procedures.

A review of the inspection records indicates that the site's first aid equipment is inspected in accordance with the stipulated frequencies. The operation inspects its first aid equipment regularly to ensure that it is available when needed, and materials are stored and/or tested as directed by their manufacturer.

The operation has developed and implemented a site-specific Emergency Management Plan to respond to cyanide incidents. The Emergency Management Plan clearly defines the procedures for providing first aid in the event of a cyanide exposure.

The operation does have its own on-site capability to provide medical assistance to workers exposed to cyanide. Procedures have been developed to transport workers exposed to cyanide to locally available qualified off-site medical facilities, who are aware of this requirement.

The operation has made formalised arrangements with the Boddington District Hospital to ensure it is aware of the potential need to treat patients for cyanide exposure. This arrangement has recently been reconfirmed by all parties.

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.

The operation is
- ☒ IN FULL COMPLIANCE
- ☐ IN SUBSTANTIAL COMPLIANCE with Standard of Practice 7.1.
- ☐ NOT IN COMPLIANCE

The operation is in FULL COMPLIANCE with Standard of Practice 7.1

The site has developed an Emergency Management Plan to address potential accidental releases of cyanide. The Emergency Management Plan details the required response equipment, responsibilities, and procedures for anticipated cyanide emergencies.

The Emergency Management Plan also covers numerous different emergency scenarios including hazardous materials and details management actions to be taken in the event of an emergency. This includes specific actions relating to cyanide.

The Emergency Management Plan considers the potential cyanide failure scenarios and potential events appropriate for the operation's site specific environmental, safety and operating circumstances, as required by this audit protocol. There is no heap leach facility at the site.

The cyanide supplier is responsible to respond to transport incidents up until the vehicle enters the mine lease. The supplier has a Transport Management Plan for delivering cyanide to site that details response actions in the event of an emergency.

The Emergency Management Plan describes specific response procedures (as appropriate for the anticipated emergency situations) such as clearing site personnel from the area of exposure, controlling releases at their source and the use of cyanide antidotes and first aid measures.

Area specific emergency evacuation procedures details the process by which site personnel are evacuated to appropriate site muster points and subsequent removal of site personnel from the mine site if required. The nearest community (Boddington) is a fair distance away from the site so there is no community evacuation procedure required.

The Cyanide Medical Treatment Protocol details the first aid procedure to be followed in the event of a cyanide exposure incident. The procedure details symptoms of exposure, cyanide kits, treatment locations, training and response.

Standard of Practice 7.2
Involve site personnel and stakeholders in the planning process.

The operation is
- ☒ IN FULL COMPLIANCE
- ☐ IN SUBSTANTIAL COMPLIANCE with Standard of Practice 7.2.
- ☐ NOT IN COMPLIANCE

The operation is in FULL COMPLIANCE with Standard of Practice 7.2.

The operation has involved its workforce and stakeholders, including potentially affected communities, in the cyanide emergency response planning process.

Emergency procedures and plans are reviewed regularly. The workforce is consulted regarding cyanide use and emergency response procedures through regular Health and Safety representative meetings. Selected personnel from each department attend these meetings.

Cyanide emergency response capability is discussed with local communities through the Boddington Local Emergency Management Committee meetings. Local emergency services are also consulted on aspects of the Emergency Management Plan during Local Emergency Management Committee (LEMC) meetings that mine personnel attend.

The site's Emergency Management Plan details offsite stakeholders with specific roles and responsibilities relevant to cyanide emergencies. These stakeholders are the Government of Western Australia Department of Fire and Emergency Services (DFES), RAC Rescue Chopper (Rescue 65), St John's Ambulance, Designated NBG Support Doctor (offsite), and Boddington Hospital.

The Emergency Management Plan is updated regularly. Consultation and communication with stakeholders regarding updates were observed during the audit.

Standard of Practice 7.3
Designate appropriate personnel and commit necessary equipment and resources for emergency response.

The operation is

- ☒ IN FULL COMPLIANCE
- ☐ IN SUBSTANTIAL COMPLIANCE with Standard of Practice 7.3.
- ☐ NOT IN COMPLIANCE

The operation is in FULL COMPLIANCE with Standard of Practice 7.3.

The Emergency Response Plan describes the roles and interactions in an emergency. This includes details of the roles within the incident management team including the Emergency Controller and defines who can carry out this role in an emergency.

An Emergency Services Officer is on duty at the site on each shift and is designated as Incident Controller. The role of each Incident Management Team member has been described in the Emergency Response Plan.

The Emergency Response Plan details the training and evaluation requirements. The operation has Incident Management Team based on rosters. The Emergency Response Plan includes procedures for the activation and mobilization of the Emergency Response Team.

The Emergency Response Plan details responsibilities for all emergency responders and the required emergency response equipment. Detailed checklists for emergency response equipment are maintained by the Emergency Services Officers (ESOs).

The operation has confirmed that outside entities are included in the Emergency Response Plan and are aware of their involvement and are included in mock emergency drills. .

Standard of Practice 7.4
Develop procedures for internal and external emergency notification and reporting.

The operation is	☒ IN FULL COMPLIANCE	
	☐ IN SUBSTANTIAL COMPLIANCE with	Standard of Practice 7.4.
	☐ NOT IN COMPLIANCE	

The operation is in FULL COMPLIANCE with Standard of Practice 7.4.

The Boddington Clinic Quick Reference Guideline includes procedures and external contact information for notifying regulatory agencies, outside response providers and medical facilities of the cyanide emergency. The Emergency Management Plan details internal emergency response contacts and procedures.

Included in the procedures are notification of authorities, interaction with emergency services and public relations and debriefing of stakeholders, including communication externally, to corporate entities, affected communities, media and to the public. The Australia Event Reporting and Classification Procedure references a commitment to report significant cyanide incidents, as defined in ICMI's Definitions and Acronyms document, to the ICMI as part of the external reporting requirements.

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.

The operation is	☒ IN FULL COMPLIANCE	
	☐ IN SUBSTANTIAL COMPLIANCE with	Standard of Practice 7.5.
	☐ NOT IN COMPLIANCE	

The operation is in FULL COMPLIANCE with Standard of Practice 7.5.

Various plans and procedures describe specific remediation measures as appropriate for the likely cyanide release scenarios, such as:

- Recovery or neutralisation of solutions and solids
- Decontamination of soils or other contaminated media
- Management and/or disposal of spill clean-up debris
- Provision of an alternate drinking water supply

Considerations are made within plans and procedures for ground remediation and neutralisation with ferrous sulphate only for relevant scenarios. These documents also state that neither reagent be used if there is a risk of contaminating water bodies. The Cyanide Affected Soil Sampling procedure describes what analysis will be performed and what final cyanide concentrations will be allowed in soil following clean up.
The emergency documentation also identifies the need for environmental monitoring to identify the extent and effects of a cyanide release, and include sampling methodologies, parameters and where practical, possible locations. Environmental monitoring following a cyanide spill is detailed in the site's Spill Response procedure, Cyanide Affected Soil Sampling procedure and water sampling and monitoring procedures.

Standard of Practice 7.6
Periodically evaluate response procedures and capabilities and revise them as needed.

The operation is
- ☒ IN FULL COMPLIANCE
- ☐ IN SUBSTANTIAL COMPLIANCE with Standard of Practice 7.6.
- ☐ NOT IN COMPLIANCE

The operation is in FULL COMPLIANCE with Standard of Practice 7.6.

The Emergency Management Plan is reviewed annually and supporting procedures updated as required.

The operation has conducted numerous internal drills relating to cyanide that test the Emergency Management Plan and subsequent response scenarios described within the document through Emergency Response Team (ERT) and processing training events.

The Emergency Management Plan and procedures are updated following mock exercises as well as actual cyanide incidents if deficiencies are identified that are related to the root cause of the incident. Incident investigation records that were generated during the ICMC recertification period show review of relevant procedures following actual cyanide-related incidents.

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.

The operation is
- ☒ IN FULL COMPLIANCE
- ☐ IN SUBSTANTIAL COMPLIANCE with Standard of Practice 8.1.
- ☐ NOT IN COMPLIANCE

The operation is in FULL COMPLIANCE with Standard of Practice 8.1.

All NBG personnel who may encounter cyanide are required to undertake the Newmont Asia-Pacific (APAC) Sodium Cyanide Safety Awareness Induction training every 2.5 years. The training includes cyanide hazard recognition, emergency procedures, general cyanide safety, cyanide first aid and responding to alarms. Training records of completed cyanide training are retained.

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.

The operation is
- ☒ IN FULL COMPLIANCE
- ☐ IN SUBSTANTIAL COMPLIANCE with Standard of Practice 8.2.
- ☐ NOT IN COMPLIANCE

The operation is in FULL COMPLIANCE with Standard of Practice 8.2. requiring training of appropriate personnel to operate the facility according to systems and procedures that protect human health, the community and the environment.

The operation trains workers to perform their normal production tasks, including unloading, production and maintenance, with minimum risk to worker health and safety and in a manner that prevents unplanned cyanide releases. Operational and maintenance personnel are required to work through a structured training program that includes theory and practical based learning, competency assessments and ongoing periodical verification of competency.

The training elements necessary for each job involving cyanide management are identified in training materials that include training manuals and Standard Operating Procedures. NBG assign experienced and qualified process operators as Crew Trainers who are responsible for task training including tasks related to cyanide management activities. Workers are not permitted to undertake cyanide related work until the necessary training has been completed and competency has been verified.

All NBG employees are required to undertake refresher on cyanide management to ensure that employees continue to perform their jobs in a safe and environmentally protective manner. The operation evaluates the effectiveness of cyanide training through verification of competency completed for personnel who have been trained through written and practical assessments.

Records are retained throughout an individual's employment documenting the training they receive. The records do 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.

Standard of Practice 8.3
Train appropriate workers and personnel to respond to worker exposures and environmental releases of cyanide.

The operation is

- ☒ IN FULL COMPLIANCE
- ☐ IN SUBSTANTIAL COMPLIANCE with Standard of Practice 8.3.
- ☐ NOT IN COMPLIANCE

NBG is in FULL COMPLIANCE with Standard of Practice 8.3. requiring that the operation train appropriate workers and personnel to respond to worker exposures and environmental releases of cyanide

Cyanide unloading, production and maintenance personnel are trained in the procedures to be followed if cyanide is released including decontamination and first aid procedures. The Sodium Cyanide Awareness Induction training is mandatory for all personnel who work in cyanide related areas. Emergency Response Coordinators and members of the Emergency Response Team are trained in the procedures included in the emergency management plan (EMP) regarding cyanide, including the use of necessary response equipment, cyanide medical treatment and cyanide spill response (including decontamination). NBG has made off-site Emergency Responders, such as community members, local responders and medical providers, familiar with those elements of the Emergency Management Plan related to cyanide.

Refresher training for response to cyanide exposures and releases is conducted regularly through the monthly training schedule. The ERT members undergo regular weekly training that includes the skills and procedures necessary to execute response to cyanide related incidents. Records are retained throughout an individual's employment documenting the training they receive. The records 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.

PRINCIPLE 9 – DIALOGUE

Engage in public consultation and disclosure.

Standard of Practice 9.1
Promote dialogue with stakeholders regarding cyanide management and responsibly address identified concerns.

The operation is
- ☒ IN FULL COMPLIANCE
- ☐ IN SUBSTANTIAL COMPLIANCE with Standard of Practice 9.1.
- ☐ NOT IN COMPLIANCE

The operation is in FULL COMPLIANCE with Standard of Practice 9.1.

The site maintains a number of contact points and participates in a range of forums which can be utilised by stakeholders to make inquiries in relation to the use and management of cyanide.

Various publications are also publicly available which includes Environmental Impact Assessment documentation for public comment during expansion projects.

All visitors must check-in at the gatehouse and are signed in by a Site Sponsor who can answer or refer any queries related to cyanide. Dialogue with the workforce is initiated through inductions, toolbox meetings, newsletters and regular safety meetings.

Standard of Practice 9.2
Make appropriate operational and environmental information regarding cyanide available to stakeholders.

The operation is
- ☒ IN FULL COMPLIANCE
- ☐ IN SUBSTANTIAL COMPLIANCE with Standard of Practice 9.2.
- ☐ NOT IN COMPLIANCE

The operation is in FULL COMPLIANCE with Standard of Practice 9.2.

The Sustainability Report and the Annual Environmental Report are available to Employees through Prospector. The Sustainability Report is also publicly available on the Newmont website and the Annual Environmental Review submitted to regulators.

These two documents are the primary means of regulator and public reporting and include detail on any cyanide incidents. The Australia Event Reporting and Classification Procedure references a commitment to report to the ICMI as part of the external reporting considerations.

There is not a significant proportion of population which is illiterate hence a verbal dissemination of material has not been deemed necessary. Stakeholder meetings are held regularly, and the public can visit the Community Information Centre located in Boddington Township if there is a need to discuss any cyanide related matters.