



# **Table of Contents**

Location Detail and Description of Operation	1
SUMMARY AUDIT REPORT	4
Auditor's Finding	4
PRINCIPLE 1 - PRODUCTION:	5
Standard of Practice 1.1:	5
PRINCIPLE 2 - TRANSPORTATION:	7
Standard of Practice 2.1:	7
PRINCIPLE 3 – HANDLING AND STORAGE:	9
Standard of Practice 3.1:	9
Standard of Practice 3.2:	13
PRINCIPLE 4 – OPERATIONS:	15
Standard of Practice 4.1:	15
Standard of Practice 4.2:	22
Standard of Practice 4.3:	24
Standard of Practice 4.4:	27
Standard of Practice 4.5:	29
Standard of Practice 4.6:	30
Standard of Practice 4.7:	32
Standard of Practice 4.8:	35
Standard of Practice 4.9:	
PRINCIPLE 5 – DECOMMISSIONING:	39
Standard of Practice 5.1:	39
Standard of Practice 5.2:	40
PRINCIPLE 6 – WORKER SAFETY:	42
Standard of Practice 6.1:	42
Standard of Practice 6.2:	44
Standard of Practice 6.3:	47
PRINCIPLE 7 – EMERGENCY RESPONSE:	50
Standard of Practice 7.1:	50
Standard of Practice 7.2:	52
Standard of Practice 7.3:	54
Standard of Practice 7.4:	56
Standard of Practice 7.5:	58
Standard of Practice 7.6:	59
PRINCIPLE 8 – TRAINING:	61
Standard of Practice 8.1:	61
Standard of Practice 8.2:	63
Standard of Practice 8.3:	65
PRINCIPLE 9 – DIALOGUE:	68
Standard of Practice 9.1:	68
Standard of Practice 9.2:	70
APPENDIX A: Important Information	72



# **Summary Audit Report for Mining Operations**

Name of Mine: Granny Smith Gold Mine (GSGM)

Name of Mine Owner: Gold Fields Australia Pty Ltd

Name of Mine Operator: GSM Mining Company Pty Ltd

Name of Responsible Manager: Neil Lester, Processing Manager

Address: GSM Mining Company Pty Ltd

Mount Weld Road Laverton WA 6440

Australia

Contact Telephone: +61 8 9088 2203

Fax: None

Email: Neil.Lester@goldfields.com

# **Location Detail and Description of Operation**

Granny Smith Gold Mine (GSGM) is located 720 km east-north-east of Perth in Western Australia and 23 km south-west of Laverton, Western Australia, within the Shire of Laverton. Tenure associated with the Project is contained within the Mt Margaret Mineral Field districts of Mt Margaret and Mt Morgan's.

The operation is part of the Gold Fields Australia group of companies, the ultimate parent company of which is Gold Fields Limited.

The development of the mine was commenced by Placer Gold Operations via approval of three Open Pits in the Granny Smith Project Area: the Granny Smith Open Pit, the Goanna Open Pit and the Windich Open Pit.

Mining of the Goanna Open Pit commenced in 1989 and was completed at the end of 1992, whilst mining of the Windich Open Pit ceased in April 1997. Rehabilitation of the major Waste Rock Landforms associated with the Open Pits was undertaken progressively from 1992 to 1997.

In 1989, processing, supporting infrastructure and the Granny Smith Tailings Storage Facility (TSF) was additionally established within the Granny Smith Project Area.

The Childe Harold Open Pit is located 1.5 km to the west of the Granny Smith Processing Plant. The Childe Harold Open Pit was mined as a satellite deposit in 1992,

	THGIN	
Granny Smith Gold Mine		29 April 2022
Name of Mine	Signature of Lead Auditor	Date



then was directly backfilled during the mining of the adjacent Phoenix Open Pit in 1993 and is no longer active. Rehabilitation of the Childe Harold Waste Rock Landforms was undertaken in 1994.

The Keringal Project area is located approximately 16 km southeast of the GSGM Processing Plant. The Keringal Open Pit was mined as a satellite deposit in the mid-1990s, with initial mining commencing in January 1994. Rehabilitation of the Keringal Waste Rock Landforms was undertaken in 1996 and 1997.

The Jubilee satellite deposit is located approximately 26 km south of the GSGM Processing Plant. Pre-stripping and production commenced in 2000, mining ceased at the end of 2001 and the Waste Rock Landforms were rehabilitated in 2001 and 2002.

The Wallaby Project area is located west of Granny Smith Gold mine on the edge of Lake Carey. Open pit production commenced in 2001 and ended in 2006. The underground mining operation commenced in 2004 and is currently the only active mining at Granny Smith Gold mine. The mine was acquired from Placer Gold Operations by Barrick Gold in March 2006 and ownership of the Project transferred to Gold Fields from Barrick Gold in October 2013.

Granny Smith Gold Mine has been in continual operation since commissioning in 1989.

The GSGM Processing Plant was originally designed and commissioned to treat oxide gold ores mined from the Goanna, Granny and Windich pits. The plant has been periodically upgraded, based upon production requirements and ore types. The processing plant currently implements a campaign milling schedule, processing the sulphide ore mined from the Wallaby underground deposit.

GSGM ore processing consists of a two-stage fresh ore crushing circuit with closed circuit screening, a standard Semi-autogenous mill and Ball mill (SABC) grinding circuit, a gravity recovery circuit, a mechanically agitated Leach/Carbon in Pulp (CIP) circuit, a pressure Zadra elution circuit, a tailings gravity recovery circuit with regrind, a doré gold production facility, a carbon reactivation circuit, and a thickened tailings storage facility (TSF).

Australian Gold Reagents Pty Ltd (AGR) manufactures and transports liquid sodium cyanide to GSGM via its West Australian Supply Chain.

The operation receives sodium cyanide solution at a nominal concentration of 30% weight/weight (w/w), although the concentration is modified slightly upwards in summer and downwards in winter, to account for the freezing point of the solution. The sodium cyanide solution is transported in isotainers by rail from AGR's production facility located at Kwinana some 40 km south of Perth within the state of Western Australia, to a trans-shipping facility at Kalgoorlie, from where it is then transported

	THGIN	
Granny Smith Gold Mine		29 April 2022
Name of Mine	Signature of Lead Auditor	Date



by road to the operation. No solid cyanide, other than minor quantities used in the site laboratory, is transported to, stored, mixed or used at the operation.

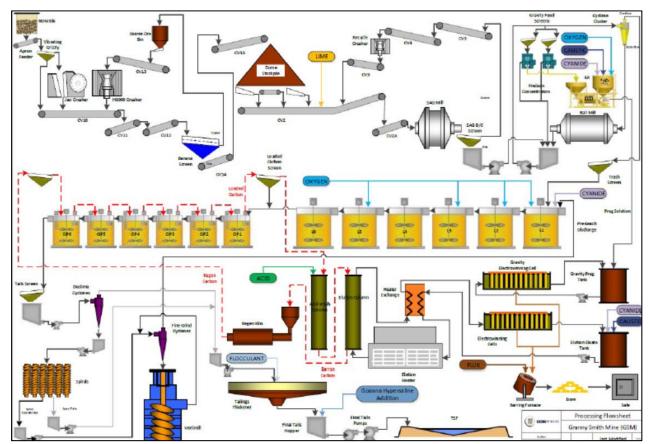


Figure 1 Granny Smith Gold Mine Simplified Ore Processing Flowsheet

**Granny Smith Gold Mine** 

Name of Mine

Signature of Lead Auditor

29 April 2022

Date



# **SUMMARY AUDIT REPORT**

# **Auditor's Finding**

	3
This Operation is	
☑ in full compliance	
$\square$ in substantial compliance	
$\square$ not in compliance	
with the International Cyanide Manage	ement Code.
This Operation has not experienced any year audit cycle.	y compliance issues during the previous three-
Audit Company: Audit Team Leader: Email: Dates of Audit:	Veritas Metallica Pty Ltd Tom Gibbons Tom_G@westnet.com.au 08 – 11 November 2021 inclusive
Names and Signatures of Other Auditor	rs:
for ser.	
Greg Smith 29 April 2022	
Code Verification Audit Team Leade Management Institute, and that all me	wledge, experience and conflict of interest for r, established by the International Cyanide embers of the audit team meet the applicable nal Cyanide Management Institute for Code
verification audit. I further attest th professional manner in accordance with	port accurately describes the findings of the at the verification audit was conducted in a the International Cyanide Management Code ions and using standard and accepted practices udits.
TH	Ging
Granny Smith Gold Mine	

Signature of Lead Auditor

Date

Name of Mine



#### **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.

$\overline{\!$	
$\hfill\Box$ in substantial compliance with	Standard of Practice 1.1
$\square$ not in compliance with	
	☐ in substantial compliance with

#### Summarize the basis for this Finding/Deficiencies Identified:

GSGM is in FULL COMPLIANCE with 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.

All cyanide purchased by the mine was manufactured at a facility certified as being in compliance with the Code.

During the audit period, GSGM purchased cyanide solely from Australian Gold Reagents Pty Ltd (AGR). AGR is the management company of the unincorporated joint venture between CSBP Limited (CSBP) and Coogee Chemicals Pty Ltd. CSBP is part of the Wesfarmers Chemicals, Energy and Fertilisers Division of Wesfarmers Limited. CSBP is the major participant in the venture and acts as operator and sales agent for the AGR business. As the operating agent, employees of CSBP act on behalf of AGR.

The cyanide supplied by Australian Gold Reagents Pty Ltd (AGR) was solely in the form of sodium cyanide solution within 22 cubic metre isotainers. The supplied sodium cyanide solution strength is nominally 28.0% w/w +/- 1.5% in winter, and 31.5% +/- 1.5% w/w in summer.

GSGM has a contract with the cyanide manufacturer and supplier Australian Gold Reagents Pty Ltd (AGR). The contract requires that that the cyanide be produced at a facility that has been certified as being in compliance with the Code. The term of the contract was active for the entire audit period.

	THEN	
Granny Smith Gold Mine		29 April 2022
Name of Mine	Signature of Lead Auditor	Date



During the audit period, all cyanide purchased by GSGM was manufactured at a facility certified as being in full compliance with the Code. GSGM has purchased cyanide solely from Australian Gold Reagents Pty Ltd (AGR) during the audit period, with all supplied cyanide being manufactured at Australian Gold Reagents Pty Ltd (AGR)'s Kwinana Production Facility. This Production Facility remained certified in full compliance with the Code during the audit period, and was most recently certified in full compliance with the Code on 22 September 2020.

GSGM did not purchase cyanide from any independent distributors during the audit period.

Granny Smith Gold Mine		29 April 2022
Name of Mine	Signature of Lead Auditor	Date

THCIN



# **PRINCIPLE 2 - TRANSPORTATION:**

Protect communities and the environment during cyanide transport.

# **Standard of Practice 2.1:**

Name of Mine

Require that cyanide is safely managed through the entire transportation and

	the production facility to the mine b ponsibility for safety, security, releas	
	☑ in full compliance with	
The Operation is	$\square$ in substantial compliance with	Standard of Practice 2.1
	$\square$ not in compliance with	
Summarize the basis	for this Finding/Deficiencies Identif	ïed:
safely managed thro production facility t	MPLIANCE with Standard of Practice bugh the entire transportation and o the mine by use of certified transfety, security, release prevention	delivery process from the ansport with clear lines of
transporters and support to the operation. The Dockets, Goods Reco	of custody records and other doc oly chains responsible for transportin his documentation consists of Tax II ceipt Slips, and Electronic Invento custody records for cyanide supply	g cyanide from the producer nvoices, CSBP/AGR Delivery ory Records. GSGM have
West Australian Sup within chain of custoo	ents Pty Ltd (AGR) is the designated ply Chain. Additionally identified wdy records and other documentation, st Australian Supply Chain – Qube Bu	ithin this supply chain, and is the road transporter used
All identified transpo included in a certified	rters are individually certified in cor d supply chain.	mpliance under the Code or
Granny Smith Gold Mine	THGIN	29 April 2022

Date



Cyanide is transported to GSGM via the Australian Gold Reagents Pty Ltd West Australian Supply Chain. This supply chain remained certified in full compliance under the Code for the duration of the audit period. The relevant recertification dates for the audit period were 26 September 2016, and 15 November 2019.

Additionally, the road transporter Qube Bulk Pty Ltd, identified within the Australian Gold Reagents Pty Ltd West Australian Supply Chain, remained certified in full compliance under the Code for the duration of the audit period. The most recent recertification date is 03 February 2022.

The Australian Gold Reagents Pty Ltd West Australian Supply Chain Code certification includes verification of clear designation of responsibility for safety, security, release prevention, training and emergency response as applicable to the transportation of cyanide to GSGM. GSGM has continued to utilise Australian Gold Reagents Pty Ltd as sole Producer and Transporter of cyanide during the audit period and contractually requires that AGR comply at all times with the Code. The supply contract addresses roles and responsibilities for safety, security, release prevention, training, and emergency response.

	THGIN	
Granny Smith Gold Mine		29 April 2022
Name of Mine	Signature of Lead Auditor	Date



# PRINCIPLE 3 - HANDLING AND STORAGE:

Protect workers and the environment during cyanide handling and storage.

# **Standard of Practice 3.1:**

Name of Mine

Design and construct unloading storage and mixing facilities consistent with sound

accepted engineering	g practices, quality control/quality as. containment measures.	•
	oxdiv I in full compliance with	
The Operation is	$\square$ in substantial compliance with	Standard of Practice 3.1
	$\square$ not in compliance with	
Summarize the basis	s for this Finding/Deficiencies Identif	ied:
unloading, storage a	MPLIANCE with Standard of Practice and mixing facilities consistent with sontrol/quality assurance procedures res.	ound, accepted engineering
in accordance with one other sound and accordance in the cound and accordance in the country accordance	nloading and storing cyanide have been by anide producers' guidelines, applice epted engineering practices. GSGM reported mixing facilities exist at the Ope	able jurisdictional rules and eceives only sodium cyanide
and storage facility previous Recertificat have occurred durin drain valves to the owall to comply with	ations and construction records for were assessed, referenced and fountion and Initial Certification Audit Report than the material unloading pipeline, and to insure the Mestern Australian Dangerous Goods that these works were completed s.	nd in full compliance during orts. No changes to this area inor modifications to install acrease the height of splash is requirements. GSGM have
The cyanide produce inspections of the fa	er Australian Gold Reagents Pty Ltd co cilities.	ntinues to undertake annual
	THGIN	
Granny Smith Gold Min	ue V	29 April 2022

Page **9** of **72** 

Signature of Lead Auditor

Date



GSGM unloading and storage areas for liquid cyanide are located away from people and surface waters. GSGM receives only sodium cyanide solution, thus no cyanide mixing facilities exist at the Operation.

The location of unloading and storage facilities is unchanged from the previous recertification audit, and remains strategically located away from people, surface waters, and incompatible chemicals. General access to the Processing Plant is controlled via a security gate. The cyanide storage facility remains located within a fenced, bunded area, with no surface water in the vicinity. Entry gates are locked at all times with access restricted to authorised, competent personnel. Access is controlled by the Shift Supervisor. The facilities are separate and distant from incompatible materials, including incompatible chemicals, explosives and foods.

GSGM unloads liquid cyanide on a concrete surface that can minimize seepage to the subsurface, and the unloading area is designed and constructed to contain, recover or allow remediation of any leakage from the tanker truck or isotainer system.

Unloading occurs on a concrete pad / apron. The concrete unloading pad is designed and constructed with a gradient towards a sump such that spillage can be pumped out to the cyanide reagent storage bund secondary containment if required. This containment area has a sump and pumping facilities to allow return of spillage to process tanks. The concrete was observed to be in good condition and appropriate to minimise seepage to the subsurface.

GSGM has developed plans and procedures to address potential leakage during cyanide unloading.

Systems are in place to prevent overfilling of cyanide storage tanks, and the systems are tested and maintained on a routine basis.

Several layers of protection exist to prevent overfilling of the cyanide storage tank, including dual level indicators, high-level alarms, automatic and manual shut-off systems, and inspection, observation and unloading procedures. GSGM implements a Cyanide Unloading/Delivery Procedure, which includes multiple checks to prevent overfilling of the cyanide storage tank. Local signage at the Unloading facility advises personnel of cyanide unloading procedures and tank level checks to be performed prior to delivery to prevent overfilling of cyanide storage tank.

GSGM maintenance personnel routinely inspect, test, maintain and calibrate the level detection systems.

	THEN	
Granny Smith Gold Mine		29 April 2022
Name of Mine	Signature of Lead Auditor	Date



The Cyanide Storage Tank is located on a concrete surface that can prevent seepage to the subsurface. No cyanide mixing tanks exist at GSGM.

The location of the Cyanide Storage Tank is unchanged from the previous recertification audit, and remains upon a solid concrete plinth, with an integral concrete secondary containment bund. The concrete was observed to be in good condition.

Secondary containments for cyanide storage tanks are constructed of materials that provide a competent barrier to leakage. No cyanide mixing tanks exist at GSGM.

The GSGM Cyanide Storage Tank is located within a concrete bunded secondary containment that provides a competent barrier to leakage. The secondary containment was found to be clean and in good condition during the field inspection, with visual evidence of ongoing routine minor concrete repairs to maintain condition of concrete. Inspection of both the secondary containment and the concrete unloading pad form part of the annual inspection conducted by the cyanide producer and transporter Australian Gold Reagents Pty Ltd.

Cyanide at GSGM is stored with adequate ventilation to prevent the build-up of hydrogen cyanide (HCN) gas; in a secure area where public access is prohibited, such as within the fenced boundary of the plant or within a separate fenced and locked area; and separately from incompatible materials such as acids, strong oxidizers and explosives and apart from foods, animal feeds and tobacco products with berms, bunds, walls or other appropriate barriers that will prevent mixing. GSGM solely receives sodium cyanide solution for ore processing and gold recovery; the only solid cyanide received is minor analytical grade quantities for use in the site laboratory, which is excluded from the Code.

The Cyanide Storage Tank is located in an open area exposed to the atmosphere, and has a purpose-designed vent approved by the Cyanide Producer, with air vented to atmosphere to minimise the risk of personnel exposure to hydrogen cyanide gas.

General access to the Processing Plant is controlled via a security gate. The cyanide storage facility is located within a fenced, bunded area. Entry gates are locked at all times with access restricted to authorised, competent personnel. Access is controlled by the Shift Supervisor.

Cyanide is stored separately from incompatible materials through the use of a storage location distant from incompatible materials such as acids, strong oxidizers and explosives and apart from food, animal feeds and tobacco products. The Cyanide Storage Tank is located within a concrete secondary containment with integral bund

	THGIN	
Granny Smith Gold Mine		29 April 2022
Name of Mine	Signature of Lead Auditor	Date



walls to prevent potential mixing with incompatible materials. The Barren Solution Storage Tank is also located within this secondary containment, and contains solution which has a typical cyanide concentration of 1% weight/volume (w/v). This secondary containment is interconnected to the Caustic Storage Tank concrete secondary containment. The contents of the Barren Solution Storage Tank and the Caustic Storage Tank are compatible with cyanide.

**Granny Smith Gold Mine** 

Name of Mine

Signature of Lead Auditor

29 April 2022

Date



# 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.

	oxdot in full compliance with	
The Operation is	$\square$ in substantial compliance with	Standard of Practice 3.2
	$\square$ not in compliance with	
	$\square$ not in compliance with	

# Summarize the basis for this Finding/Deficiencies Identified:

GSGM is in FULL COMPLIANCE with 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.

GSGM continue to solely utilise liquid sodium cyanide for processing requirements, and as such no cyanide mixing facilities exist on site.

GSGM continue to solely utilise liquid sodium cyanide for processing requirements, and as such no cyanide mixing facilities exist on site, nor empty solid cyanide containers, drums, plastic bags, or liners. As such, the only applicable empty cyanide containers are sodium cyanide solution isotainers. Isotainers are unloaded immediately upon arrival at the Operation, and depart site immediately upon completion of unloading.

An integral part of the unloading procedures, as noted within the CSBP Sodium Cyanide Solution Isotainer Unloading at Minesites Procedure, the CSBP Vehicle Operator's Handbook for Sodium Cyanide, and the GSGM Liquid Cyanide Unloading Work Instruction, are instructions for cleaning of any cyanide residue from the outside of cyanide isotainers and secure closing of the isotainers. These instructions include the hose connections and couplings on isotainers.

GSGM has developed and implemented plans or procedures to prevent exposures and releases during cyanide unloading activities. GSGM continue to solely utilise liquid sodium cyanide for processing requirements, and as such no cyanide mixing facilities exist on site.

	THEN	
Granny Smith Gold Mine		29 April 2022
Name of Mine	Signature of Lead Auditor	Date



GSGM received cyanide solely in the form of sodium cyanide solution within isotainers mounted upon a truck. The isotainers are unloaded directly upon arrival at site, and depart immediately thereafter. As such, no container handling or stacking occurs.

Operation of hoses, valves and couplings for unloading liquid cyanide are addressed in the CSBP Sodium Cyanide Solution Isotainer Unloading at Minesites Procedure, the CSBP Vehicle Operator's Handbook for Sodium Cyanide, and the GSGM Liquid Cyanide Unloading Work Instruction.

Timely clean up of any spills during transfer of liquid cyanide is addressed within the GSGM Cyanide Unloading Work Instruction and the Clean-up Minor Spill of Cyanide Procedure. Spill clean-up is also addressed in the CSBP Sodium Cyanide Solution Isotainer Unloading at Mine site Procedure. Significant spills requiring emergency response are addressed within the GSGM Cyanide Emergency Response Plan.

GSGM provide for safe unloading of liquid cyanide by requiring appropriate personal protective equipment and having a second individual observe from a safe area.

A GSGM Process Technician (second individual) observes every cyanide unloading event from a safe area. This second individual is known as the Spotter, and is trained in the Cyanide Unloading Procedure.

The Spotter completes an unloading checklist detailing items to be inspected/confirmed before, during and after unloading, including important checks of safety systems and equipment, and personnel protective equipment.

A GSGM Process Technician was interviewed with respect to cyanide unloading activities. He confirmed that he had been trained in the GSGM Cyanide Unloading Procedure, and demonstrated a comprehensive understanding of the cyanide unloading activities and procedures consistent with written procedures, including the specific duties of the Spotter.

Addition of colorant dye to liquid cyanide prior to delivery to site is addressed within the Cyanide Management Plan, and the addition of dye occurs at AGR's Kwinana Production Facility.

	1 H GNV	
Granny Smith Gold Mine		29 April 2022
Name of Mine	Signature of Lead Auditor	Date



#### **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.

	oxdot in full compliance with	
The Operation is	$\square$ in substantial compliance with	Standard of Practice 4.1
	$\square$ not in compliance with	

#### Summarize the basis for this Finding/Deficiencies Identified:

GSGM is in FULL COMPLIANCE with 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.

GSGM have developed written management and operating plans and procedures for cyanide facilities including, but not limited to, unloading and storage facilities, leach plants, and tailings impoundments. No cyanide mixing facilities, active heap leach operations, or cyanide regeneration and disposal systems exist at GSGM.

Procedures have been developed and implemented for the following areas of operation that involve cyanide solutions greater than 0.5 mg/L weak-acid dissociable (WAD) cyanide include: Bulk cyanide unloading and storage facilities, Grinding and milling, Leaching and carbon in pulp (CIP), Tailings and reclaimed water management, Elution, and Goldroom. There are also formalised management systems covering preventative maintenance, general risk management procedures, and emergency management.

Key Overarching Management Plans include: Cyanide Management Plan, Tailings Management Plan, Emergency Management Plan, Cyanide Emergency Response Plan, and Process Upset or Non-conformance Trigger Response Plan.

GSGM continue to maintain a comprehensive Cyanide Management Plan. Individual work instructions and guidelines exist for cyanide-related tasks and sequences within

	THGIN	
Granny Smith Gold Mine		29 April 2022
Name of Mine	Signature of Lead Auditor	Date



GSGM's cyanide facilities. Written management and operating plans, procedures, and work instructions are stored electronically within the GSGM Controlled Document system.

Procedures and work instructions have been developed for cyanide-related tasks such as cyanide unloading, plant operations, entry into confined spaces, spill management and equipment decontamination prior to maintenance.

GSGM continue to maintain plans and procedures that identify the assumptions and parameters on which the facility design was based (including but not limited to freeboard required for safe pond and impoundment operation and the cyanide concentrations in tailings on which the facility's wildlife protective measures were based) as necessary to prevent or control cyanide releases and exposures consistent with applicable regulatory requirements.

Key plans and procedures used to achieve this include, but are not limited to; Cyanide Management Plan, Tailings Management Plan, and Process Plant Design Criteria. Design Criteria documents exist for cyanide facilities, including the Processing Plant and the TSF.

GSGM continues to manage wildlife protection to design, regulatory and Code requirements, including the TSF technical reports and subsequent requisite operating conditions and Western Australian Government licence conditions.

Control of freeboard availability for the TSF is managed through the TSF Operating Manual with daily inspections and regular surveys against the minimum regulated freeboard requirements and the monitoring of TSF surface pond size.

The Cyanide Management Plan describes climate conditions including rainfall and evaporation. The GSGM Probabilistic Water Balance model was updated in 2019 and 2021, incorporating updating the existing database with recent observational data and operational changes. Design storm events and management of water and solutions is detailed in supporting evidence documents, including the Cyanide Management Plan, Probabilistic Water Balance, and TSF Operating Manual. GSGM's Tailings Management Plan identifies the assumptions and parameters on which the tailings storage facility design was based and any applicable regulatory requirements (including freeboard required for safe pond and impoundment operation) as necessary to prevent or control cyanide releases and exposures consistent with applicable requirements.

Design assumptions and parameters, and applicable regulatory requirements, including freeboard required for safe pond and impoundment operation, are evaluated during the annual Third-Party Expert Tailings Storage Facility Audit and Management Review.

	THGIN	
Granny Smith Gold Mine		29 April 2022
Name of Mine	Signature of Lead Auditor	Date



GSGM continue to implement plans and procedures that 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, including inspections and preventive maintenance activities.

These plans, procedures and work instructions describe the nominal operating conditions, systems, operating and maintenance inspections, and preventative maintenance activities. Salient documents that address these items include: Cyanide Management Plan, Master Planned General Inspection (PGI) Roster, and Asset Management Manual.

Operating plans, procedures and training manuals contain direction on specific task requirements and actions, including operational inspections in the reagent storage, leaching and tailings areas.

GSGM conduct a range of routine inspections by both Operational and Maintenance personnel. In addition to daily operational inspections, a monthly operational inspection is conducted in a wide range of operating areas. These inspections are referred to as Planned General Inspections (PGIs). Separate monthly inspections occur in the following areas: Crusher, Grinding-Reclaim, Leach-CIP, Gravity-Tails Retreatment, Elution, Thickener and Water Systems, Borefields and Windich, Reagents, Laboratory, Maintenance Workshop, Laydown Yard, Powerhouse, Aggreko Powerhouse, Loader Workshop, Gold Room, Electrical Motor Control Centres (MCC), Storm Water Diversion and Liquid Petroleum Gas (LPG) Storage Area, Bis Contractor Workshop, Rom Pads, and TSF.

Industry-standard software platforms are used to administer routine inspections of operational areas and preventive maintenance activities.

GSGM implement a comprehensive Preventative Maintenance System, with triggering/prompting of preventative maintenance tasks, planning, scheduling, execution, and close-out documentation.

GSGM implements a Management of Change (MOC) procedure to identify when changes in a site's processes or operating practices may increase the potential for the release of cyanide and to incorporate the necessary release prevention measures.

The Management of Change procedure outlines the principles and process for use at GSGM to manage proposed temporary, permanent or emergency changes. It covers administrative, physical, operational or organisational modifications, alterations or substitutions to a system, a process, plant or equipment. The purpose of the procedure is to ensure changes that impact safety, health, environment or productivity are identified, assessed, managed and appropriately communicated to all

	THGIN	
Granny Smith Gold Mine		29 April 2022
Name of Mine	Signature of Lead Auditor	Date



affected personnel. The procedure requires written notification to environmental and health and safety personnel and sign-off before a change can be instituted.

A cross-section of completed cyanide-related MOC items were reviewed and found to be consistent with the intent of evaluating the potential for the release of cyanide and to incorporate the necessary release prevention measures.

GSGM has cyanide management contingency procedures for non-standard operating situations that may present a potential for cyanide exposures and releases, such as an upset in the operational water balance that presents a risk of exceeding the design containment capacity; problems identified by facility monitoring or inspection; and temporary closure or cessation of operations.

Management Plans and procedures that address non-standard operating situations include: Temporary Cessation of Operations Cyanide Management Contingency Plan, Process Upset or Non-conformance Trigger Response Plan, Emergency Management Plan, Cyanide Emergency Response Plan, Control of Cyanide Deficiency at Tailings Facility Procedure, Lightning Protection Procedure, Mill Evacuation Procedure, Black Start Procedure, and Process Plant Training Manuals.

Non-standard operating situations addressed within management plans and procedures include: Power Failure; High weak-acid dissociable cyanide (WAD CN) concentrations in the tailings thickener, Lack of cyanide discharge at the dosing points to the Leach Tanks (possibly indicative of a leak); Low pH in Leach Tanks (indicative of risk of HCN gas release), Tank overflow from the Leach Tanks or CIP Tanks; Critical Slurry Pump Failure; High HCN gas concentrations at strategic locations of elevated risk within the Processing Plant; Cyanide delivery truck accident on mine lease resulting in shipping container damage and/or fire of same; Catastrophic release from mixing tank or dosing tank; Spill during unloading and or mixing; Process area spills/leaks; TSF rupture of Delivery/Distribution System; Tailings Overflow/Dam Breach; Detection of wildlife mortality; Differential flow detection in pipelines, indicating the possibility of a leak; and Electrical storm (lightning risk).

The Temporary Cessation of Operations Cyanide Management Contingency Plan contains detailed instructions and guidance that addresses the safe management of cyanide on site during a period of long-term temporary closure or cessation of operations for a number of scenarios, including COVID outbreaks and lack of ore from underground operations.

An extensive groundwater monitoring system monitors any potential cyanide-containing seepage. Monitoring occurs on a quarterly frequency. In addition to existing plans and procedures, GSGM employs process control equipment such as high level instrumentation, alarms, process interlocks, magnetic flowmeters, and automatically activated pumps to response to process upsets.

	THGIN	
Granny Smith Gold Mine		29 April 2022
Name of Mine	Signature of Lead Auditor	Date



GSGM carries out inspections on the following at unloading and storage and process areas, as applicable for the site: Tanks holding cyanide solutions for their 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; and 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.

GSGM carries out Operational, Maintenance and Third Party Expert Inspections at cyanide facilities.

Tanks holding cyanide solutions have inspection elements within both Plant General Inspections, Maintenance Area Inspections, and Expert Third Party Engineer Inspections addressing structural integrity and signs of corrosion and leakage.

Secondary containments are inspected during daily operator rounds and as part of the Plant General Inspection process. This includes integrity, presence of fluids and available capacity, and drains are closed/locked as applicable, to prevent accidental releases to the environment. Maintenance staff inspect the containments every 12 weeks, in addition to expert third party inspection of concrete containments.

Leak detection inspection/monitoring occurs monthly for the Process Water Pond, and quarterly for the Carbon-In-Leach (CIL) Leak Detection groundwater monitoring bores.

Pipelines, pumps and valves are inspected for deterioration and leakage during daily Operational inspections, monthly Planned General Inspections, and Preventative Maintenance inspections.

Ponds and impoundments are inspected 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. This is addressed by daily Operational inspections, monthly Planned General Inspections, focused TSF inspections, and Third Party Expert Inspections by the TSF Engineer of Record.

GSGM undertakes cyanide facility inspections on an established frequency to assure and document that they are functioning within design parameters.

Inspections are broadly divided into Operational inspections and Maintenance Inspections. Operational inspections are focused upon operating parameters, but also require inspection of equipment and infrastructure. Maintenance inspections are

	THGW	
Granny Smith Gold Mine		29 April 2022
Name of Mine	Signature of Lead Auditor	Date



focused more specifically upon equipment and infrastructure within a specific cyanide facility.

The frequency of inspections is designated with the Cyanide Management Plan for Operational inspections, and within the SAP/Asset Management Tool Preventative Maintenance System for maintenance inspections.

Daily Operational Inspections occur for the Process Plant and TSF facilities. Operational Planned General inspections occur monthly and focused on cyanide facility areas, with maintenance inspections occurring at a range of frequencies determined by equipment requirements and risk, and focused on equipment and infrastructure. A detailed inspection roster exists for Planned General Inspections.

Leak detection inspection/monitoring occurs monthly for the Process Water Pond, and quarterly for the CIL Leak Detection groundwater monitoring bores. The Cyanide unloading and storage facilities are inspected/audited annually by the cyanide producer Australian Gold Reagents Pty Ltd.

GSGM inspections are focused, completed on an adequate frequency, and provide sufficient scope and detail to assure and document that cyanide facilities are functioning to design parameters.

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, and records are retained.

GSGM continue to implement and document preventative maintenance programs and activities to ensure that equipment and devices function as necessary for safe cyanide management.

A detailed demonstration of the Preventative maintenance system was provided. During the demonstration, a cross-section of cyanide-specific equipment was interrogated and maintenance plans and records verified. Existence of prompting of preventative maintenance tasks, planning, scheduling, execution, and close-out was verified. The existence of Maintenance inspection and Work Order Field Sheet records spanning the audit period was verified.

GSGM has necessary 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.

GSGM has determined that its cyanide facilities do 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.

	THEN	
Granny Smith Gold Mine		29 April 2022
Name of Mine	Signature of Lead Auditor	Date



Irrespective, power generation redundancy exists at GSGM due to the presence of offline diesel-fired generators. The back-up power generating equipment is maintained and tested. The backup power capacity is significant, and would allow the operation of a range of fixed and portable equipment such as pumps in an emergency event.

**Granny Smith Gold Mine** 

Signature of Lead Auditor

29 April 2022

Date



#### Standard of Practice 4.2:

•	eent and operating systems to minimizens of cyanide in mill tailings.	ze cyanide use, thereby
The Operation is	<ul><li>✓ in full compliance with</li><li>☐ in substantial compliance with</li></ul>	Standard of Practice 4.2
The Operation is	·	Standard of Fractice 4.2
	$\square$ not in compliance with	

#### Summarize the basis for this Finding/Deficiencies Identified:

GSGM is in FULL COMPLIANCE with Standard of Practice 4.2: Introduce management and operating systems to minimize cyanide use, thereby limiting concentrations of cyanide in mill tailings.

GSGM conducts a program to determine appropriate cyanide addition rates in the mill and evaluate and adjust addition rates as necessary when ore types or processing practices change cyanide requirements.

GSGM conducts routine testwork and implements standard operating procedures to monitor cyanide concentrations and control cyanide addition rates, thereby limiting concentrations of cyanide in mill tailings.

Third party metallurgical testwork is undertaken to characterise potential new ore sources and for evaluation of leaching parameters and cyanide consumption. GSGM conducts daily cyanide leach testwork to optimise cyanide addition to the Leach and CIP circuit.

GSGM utilises online free cyanide and WAD cyanide analysers, as well as manual free cyanide determinations, to closely monitor and control cyanide within the Leach, CIP, and Tailings process streams.

Process Control exists with the Plant Supervisory control and data acquisition (SCADA) system, interfacing with Programmable Logic Controllers (PLC). The system monitors and controls free cyanide and WAD cyanide concentrations using multiple inputs including the online free cyanide and WAD cyanide analysers, and a specific third party process control module is used to optimise cyanide addition rates.

Plant metallurgists routinely evaluate control strategy variables such as cyanide dose points and cyanide dose ratios, using the Supervisory control and data acquisition (SCADA) interface, on-line free cyanide analyser, and on-line WAD cyanide analyser, to optimise cyanide addition rates.

	THGIN	
Granny Smith Gold Mine		29 April 2022
Name of Mine	Signature of Lead Auditor	Date



Operational evidence of optimisation of cyanide addition rates was observed during field inspections and found to exist within operational records within logsheets and operating reports.

GSGM Process Supervisors and Process Technicians demonstrated a sound understanding of the existing cyanide control strategy and supporting operating procedures, consistent with existing GSGM written procedures and work instructions.

Granny Smith Gold Mine 29 April 2022

Name of Mine Signature of Lead Auditor Date



#### Standard of Practice 4.3:

unintentional relea	ses.	r to protect agamst
	$oxedsymbol{ec{ox}}$ in full compliance with	
The Operation is	$\square$ in substantial compliance with	Standard of Practice 4.3
	$\square$ not in compliance with	

Implement a comprehensive water management program to protect against

#### Summarize the basis for this Finding/Deficiencies Identified:

GSGM is in FULL COMPLIANCE with Standard of Practice 4.3: Implement a comprehensive water management program to protect against unintentional releases.

GSGM has developed and continues to implement a comprehensive, probabilistic water balance, developed by third party hydrogeological consultants, and utilising industry standard modelling software, as reviewed in previous recertification audits.

To meet the Code's stated primary intent of the probabilistic water balance, which is to prevent overtopping of ponds and impoundments, the GSGM probabilistic water balance model considers the Tailings Storage Facilities, Process Water Pond and the Event Pond (Mill run-off collection ditch).

The probabilistic water balance model was updated in 2019 and again in 2021, incorporating operational changes, updated survey data for storage capacities, updated seepage estimates, updated rainfall and evaporation climate data, and software updates. The water balance model continues to be run on a quarterly basis. GSGM utilise third-party surveying consultants to assess relevant volumes and dimensions for input to the model.

The GSGM probabilistic water balance model considers the following aspects in a reasonable matter as appropriate for the facilities and environment:

- a) The rates at which solutions are applied to leach pads and tailings that are deposited into tailings storage facilities (no leach pads exist at GSGM);
- A design storm duration and storm return interval that provides a sufficient degree of probability that overtopping of the pond or impoundment can be prevented during the operational life of the facility;
- c) The quality of existing precipitation and evaporation data in representing actual site conditions;

	THGN	
Granny Smith Gold Mine		29 April 2022
Name of Mine	Signature of Lead Auditor	Date



- d) The amount of precipitation entering a pond or impoundment resulting from surface run-on from the upgradient watershed, including adjustments as necessary to account for differences in elevation and for infiltration of the runoff into the ground;
- e) The effects of freezing and thawing are not applicable to GSGM due to its location/climate;
- f) The model considers solution losses from seepage and evaporation;
- g) The effects of potential power outages or pump and other equipment failures are not applicable, due to no leach pads existing at GSGM, existence of power generation redundancy, and availability of portable power generators and pumps;
- h) Discharge to surface water is not applicable as this does not occur at applicable facilities at GSGM; and
- i) Other aspects of facility design that can affect the water balance.

The existing GSGM Probabilistic Water Balance Model was specifically designed by a third party hydrogeological consultant to consider the Code and address the listed aspects in a reasonable manner as appropriate for the facilities and the environment.

The results of the modelling showed no risk of overtopping of impoundments and ponds during the audit period.

GSGM 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.

Inspections of the Tailings Storage Facilities, process water pond, pipelines, pumps and other cyanide facilities are carried out according to a range of Inspection regimes.

An annual Tailings Storage Facilities audit is conducted by a suitably qualified geotechnical engineer, as required by regulatory authorities, to ensure the facility is operating in a safe and efficient manner.

GSGM issue a quarterly TSF Management Report as an internal Gold Fields standard requirement. This report contains detailed compliance reporting for both Code requirements and other regulatory and internal standards, including embankment freeboards, stability minimum Factor of Safety, groundwater monitoring, tails discharge WAD CN, seismic events, decant pond levels, completion of scheduled audits and inspections, follow-up actions on track, development projects on track, stakeholder engagement, and incidents / near-misses.

	THGIN	
Granny Smith Gold Mine		29 April 2022
Name of Mine	Signature of Lead Auditor	Date



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

At GSGM, the TSFs are operated to maintain a minimum of 300mm available freeboard from the wall crest to the tailings at the edge of the cell (i.e. wall height) and 500mm freeboard for the supernatant to tailings at the edge of the cell (i.e. tailings beach height).

The quarterly TSF surveys that are used as inputs to the water balance model also provide a check on the 300mm Freeboard requirement, and freeboard compliance is reported within the quarterly TSF Management Report.

GSGM measures precipitation and compares results to design assumptions, with revision of operating practices as necessary. Precipitation observations are made via the Western Australian Bureau of Meteorology Station No 012045 situated at Laverton. The GSGM Probabilistic Water Balance model is regularly updated to incorporate the latest observation data for rainfall and evaporation. Climate, rainfall, evaporation, and groundwater abstraction data summaries are reported annually to the Western Australian Department of Water and Environmental Regulation.

Granny Smith Gold Mine	190	29 April 2022	
Name of Mine	Signature of Lead Auditor	Date	

THON



# Standard of Practice 4.4:

Implement measures effects of cyanide pro	to protect birds, other wildlife and livess solutions.	vestock from adverse
	$\ensuremath{ \ensuremath{ \square} }$ in full compliance with	
The Operation is	$\hfill\Box$ in substantial compliance with	Standard of Practice 4.4
	$\hfill\Box$ not in compliance with	

#### Summarize the basis for this Finding/Deficiencies Identified:

GSGM is in FULL COMPLIANCE with Standard of Practice 4.4: Implement measures to protect birds, other wildlife and livestock from adverse effects of cyanide process solutions.

GSGM continues to implement measures to restrict access by wildlife and livestock to all open waters where WAD cyanide exceeds 50 mg/l.

Consistent with the previous recertification audit report, GSGM has the following active open water bodies: TSF Cell 1, TSF Cell 3, TSF seepage drain, Goanna Abandoned Pit, Granny Smith Abandoned Pit, Windich Pit, and Process Water Pond.

During the audit period, defined for this data set as the period from 08 October 2019 to 29 October 2021, the cyanide concentration in open water in these open water bodies, which includes TSFs, leach facilities and solution ponds, and the tailings slurry spigot discharge into the TSF cells the supernatant pond for each cell, was maintained below 50 mg/l WAD CN.

Notwithstanding the maintenance of cyanide concentrations in open waters below 50mg/I WAD CN, GSGM employs measures to restrict access by wildlife and livestock, including a fence with locked gate around Process Water Pond, minimisation of infrastructure near cyanide bearing habitats, filling in seepage collection trenches with gravel; and vegetation suppression and removal near cyanide bearing water bodies.

GSGM can demonstrate that the cyanide concentration in open water in TSFs, leach facilities and solution ponds, including the tailings slurry spigot discharge into the TSF cells the supernatant pond for each cell, and the Process Water Pond, was maintained below 50 mg/l WAD CN.

During the audit period, defined for this data set as the period from 08 October 2019 to 29 October 2021, the cyanide concentration in open water in TSFs, leach facilities and solution ponds, including the tailings slurry spigot discharge into the TSF cells the supernatant pond for each cell, and the Process Water Pond, was maintained below

	THEN		
Granny Smith Gold Mine		29 April 2022	
Name of Mine	Signature of Lead Auditor	Date	



50 mg/l WAD CN, as supported by documented data records and internal and external reporting.

As noted in previous recertification audit reports, GSGM was found to be in full compliance with this question via demonstration of a hypersaline protective mechanism.

The protective mechanism was established via a series of scientific studies carried out by suitably qualified personnel who had previous experience in researching the impact of hypersalinity in tailings on wildlife cyanide toxicosis. The studies were peer reviewed by suitably qualified peer reviewers.

Whilst GSGM has managed WAD CN concentrations in open waters such that no exceedances of the 50 mg/l limit occurred during the audit period, GSGM have elected to maintain operating parameters consistent with those required to demonstrate maintenance of the hypersaline protective mechanism.

Site field inspections and provided records confirm adherence to these operating practices, including intensive monitoring for wildlife fatalities.

Maintaining a WAD cyanide concentration of 50mg/l or less in open water is effective in preventing significant wildlife mortality.

Wildlife incidents and/or mortalities are reported within the GSGM InTuition information management system (INX), the GSGM Environmental Incident Register, and the Fauna Injury & Mortality Incident Register as applicable.

In addition to chemical monitoring, GSGM conduct and record wildlife observations at designated locations on a daily basis. The observations are conducted by site personnel who have received specific wildlife observation training by third-party experts. Records of individual wildlife observation sheets are retained, and results are consolidated in a Wildlife Monitoring Database.

Intensive third party wildlife monitoring is carried out quarterly by third party wildlife experts, and includes reviewing monitoring results, observing onsite monitoring, conducting monitoring concurrently with onsite staff, or other investigations as needed to ensure that the onsite monitoring is effectively recording details of wildlife visitations and utilisation, as well as mortalities (if any). This also includes Acoustic Bat monitoring at the TSF.

All wildlife mortality events recorded at processing facilities during the audit period were recorded and investigated, with third party expert assistance as applicable. No wildlife mortality events during the audit period were found to be cyanide-related.

	THGIN	
Granny Smith Gold Mine		29 April 2022
Name of Mine	Signature of Lead Auditor	Date



# Standard of Practice 4.5:

<u> </u>	<u></u>		
Implement measures to protect fish and wildlife from direct and indirect discharges of cyanide process solutions to surface water.			
The Operation is	<ul><li>✓ in full compliance with</li><li>☐ in substantial compliance with</li><li>☐ not in compliance with</li></ul>	Standard of Practice 4.5	
Summarize the basis for this Finding/Deficiencies Identified:			
GSGM is in FULL COMPLIANCE with Standard of Practice 4.5: Implement measures to protect fish and wildlife from direct and indirect discharges of cyanide process solutions to surface water.			
GSGM continue to have no direct or indirect discharge to surface water from any defined cyanide facility. GSGM monitors for direct discharge of de-watering mine water to surface water, and can demonstrate that this is no greater than 0.5 mg/l WAD CN.			

GSGM monitors for cyanide in surface water downgradient of the operation. There are no established mixing zones.

Notwithstanding that the Goanna Pit and Granny Pit are not natural water bodies and hence not defined as surface water, GSGM monitors for potential impact of TSF seepage through quarterly pit water sampling. These pits receive seepage recovery water by design, for return to the processing facilities.

GSGM's Licence conditions issued by the Government of Western Australia Department of Water and Environmental Regulation stipulate a limit of 0.5mg/l WAD CN and 1mg/l total cyanide, with quarterly monitoring required for the Goanna Pit and Granny Pit.

During the audit period, no exceedance of these limits occurred.

GSGM monitoring has detected no evidence that indirect discharges from the operation have caused cyanide concentrations in surface water to rise above levels protective of a designated beneficial use for aquatic life.

	THGIN	
Granny Smith Gold Mine		29 April 2022
Name of Mine	Signature of Lead Auditor	Date



# **Standard of Practice 4.6:**

Implement measures the beneficial uses of	designed to manage seepage from c ground water.	yanide facilities to protect
The Operation is	<ul><li>☑ in full compliance with</li><li>☐ in substantial compliance with</li><li>☐ not in compliance with</li></ul>	Standard of Practice 4.6

#### Summarize the basis for this Finding/Deficiencies Identified:

GSGM is in FULL COMPLIANCE with Standard of Practice 4.6: Implement measures designed to manage seepage from cyanide facilities to protect the beneficial uses of ground water.

GSGM implements specific water management or other measures to manage seepage to protect the beneficial use(s) of ground water beneath and/or immediately down gradient of the operation.

There are currently no identified beneficial uses of groundwater.

Seepage water management measures include tailings deposition techniques, monitoring bores, a seepage recovery trench, and recovery bores. The existence of groundwater monitoring bores, a seepage recovery trench, and production bores was verified during field inspections. Tailings deposition techniques were verified within GSGM operating plans and procedures, and via interviews with operating personnel.

GSGM monitor for cyanide in groundwater downgradient of the site and can demonstrate that concentrations of WAD cyanide and total cyanide in groundwater at compliance points below or downgradient of the facility are at or below protective levels.

GSGM's Licence conditions issued by the Government of Western Australia Department of Water and Environmental Regulation stipulate a limit of 0.5mg/l WAD CN and 1mg/l total cyanide at the compliance points (monitoring bores GMB1, GMB2, GMB3, and GMB4, with quarterly monitoring required. During the audit period, no exceedance of these limits occurred.

GSGM monitor and report ground water quality on a quarterly basis to the local jurisdiction – the Western Australian Government Department of Water and Environmental Regulation. Groundwater quality, including WAD cyanide concentration, is also reported on an annual basis within GSGM's Annual

	THEN	
Granny Smith Gold Mine		29 April 2022
Name of Mine	Signature of Lead Auditor	Date



Environmental Report, which is submitted to the Western Australian Government Department of Water and Environmental Regulation.

GSGM employs four cyanide monitoring bores down gradient of the Processing Plant. The primary purpose of these monitoring bores is the detect leakage or seepage from the Leach and CIP tanks. The bores have been sampled on a quarterly basis since 2010. During the audit period, most results were below the detection limit of 0.004 mg/l WAD CN, with the highest result being 0.008 mg/l WAD CN.

GSGM have evaluated the potential impacts to worker health and the beneficial uses of ground water in the use of mill tailings as underground backfill, and implemented measures as necessary to address them.

At the time of the last recertification audit, GSGM had completed construction of an Underground backfill Paste Plant, and were commencing commissioning of the facility. The facility was subsequently commissioning and was in operation for the duration of the current audit period.

GSGM utilise dry mill tailings from TSF 2 for back fill operations at the Wallaby Underground mine. Laboratory testwork and associated risk assessment demonstrated that process solutions within the Paste Fill plant will not exceed 0.5mg/l WAD CN, and therefore not considered a risk to workers or the environment, and thus Paste Fill (Backfill) Plant is not considered a cyanide facility within the Code.

Cyanide sampling and analysis associated with the backfill operation has confirmed that process solutions in the plant will not exceed 0.5 mg/l WAD CN. Nevertheless, all infrastructure including containment ponds was designed and built in a manner consistent with Code requirements.

GSGM routinely samples feed tailings and backfill streams to monitor cyanide concentration. GSGM requires use of HCN personal monitors during backfill operations, and has installed fixed HCN detectors at the Paste Fill (Backfill) Plant.

Seepage from the operation has not caused cyanide concentrations of ground water to rise above levels protective of beneficial use. Irrespective, GSGM continue to implement seepage inspection and management activities.

	1 H GNV	
Granny Smith Gold Mine		29 April 2022
Name of Mine	Signature of Lead Auditor	Date



# **Standard of Practice 4.7:**

Name of Mine

Provide spill prevention	n or containment measures for proce	ess tanks and pipelines.
	☑ in full compliance with	
The Operation is	$\square$ in substantial compliance with	Standard of Practice 4.7
	$\square$ not in compliance with	
Summarize the basis f	or this Finding/Deficiencies Identific	ed:
	PLIANCE with Standard of Practice 4 ures for process tanks and pipelines.	.7: Provide spill prevention
•	vide a number of measures for spill ng, storage and process solution tank	-
concrete secondary co	ank is located upon on a solid concre intainment bund. All process tanks a ary containment bunds.	•
installed such that 0.5 underground sections by concrete or othe circumstance, GSGM coperation the option to Risk based Inspection (programme of near	nks (13) were installed prior to the to 1.0 m of side wall are below to the tanks are not separated from impermeable material as required to implement the provision of the tanks are not separated from the provision of the tanks of loss of contain (RBI) in accordance with a recognise refield groundwater monitoring any result from such loss.	the ground surface. These the geological environment red by the Code. In this of the Code that allows the nment by a combination of d standard, together with a
and all cyanide critical	ance inspections and programs are care equipment. All reagent bunds are in and the cyanide storage area is supplier.	nspected monthly as part of
based tank area insperincluding the Cyanide tank inspection and	ction and maintenance measures ind ctions and monthly operations-base Storage Area and CIL Tank Area; de refurbishment by Third Party ance concrete inspections.	d inspections of tank areas, tailed internal and external
Granny Smith Gold Mine	THGIN	29 April 2022

Signature of Lead Auditor

Date



Field inspections carried out during the audit confirmed that secondary containments for the cyanide storage tank, Leach tanks, CIP tanks and Event Pond were in good condition, and free from slurry, sediment or solutions.

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. No mixing tanks exist at GSGM.

No changes have occurred in the audit period to influence the existing volume calculations, which confirm that applicable secondary containments are sized to contain 110% of the volume of the largest tank within the containment.

Procedures are in place and being implemented to prevent discharge to the environment of any cyanide solution or cyanide-contaminated water that is collected in a secondary containment area.

Relevant procedures include: Cyanide Management Plan, Cyanide Emergency Response Plan, Tailings Management Plan, Planned General Inspection Area Procedures, Liquid Cyanide Unloading Procedure, Liquid Cyanide outside Bunded Areas Procedure, Clean-up Minor Spill of Cyanide Procedure, Tailings Storage Facility Operation of Thickener Procedure, and Critical Slurry Pump Failure Procedure.

Any cyanide solution or cyanide-contaminated water that collects in secondary containments is removed in a timely manner via sump pumps, which return process solution to the Process Plant, in order to prevent unintentional release to the environment. All concrete secondary containment bunds have at least one sump pump that can be operated to return any spillage back to the process and hence maintain the capacity of the bund during operation. Many sump pumps are automatically or remotely activated to improve response time to a spill.

Spills into the event pond are pumped to the tailings storage facilities using a portable submersible pump. Any non-pumpable material/slurry remaining in the base of the sump is allowed to dry out at which point it is physically removed and disposed of in the tailings storage facilities. Clean up of spillage external to containment or to the Event Pond occurs in accordance with the GSGM Clean-up Minor Spill of Cyanide Procedure, Liquid Cyanide outside Bunded Areas Procedure, or the Cyanide Emergency Response Plan.

Secondary containments are inspected frequently by Operations personnel to detect collection of discharge.

GSGM capture incident reports and associated remedial actions concerning discharge of process solutions external to containment, and near misses, internally using the INX system. Applicable incidents are reported to applicable jurisdictions (Government of

	THGIN	
Granny Smith Gold Mine		29 April 2022
Name of Mine	Signature of Lead Auditor	Date



Western Australia Department of Mines, Industry, Regulation and Safety; and Department of Water and Environment Regulation) in GSGM Annual Environmental Reports.

No reportable spillage events involving process solution occurred during the audit period. No spillage to the Event Pond occurred during the audit period.

Secondary containments are in place for all cyanide process tanks.

GSGM provides spill prevention or containment measures for all cyanide process solution pipelines to collect leaks and prevent releases to the environment.

Process solution pipelines within the Process Plant have secondary containment via concrete bunds. The tailings pipeline and return water pipelines are placed within an earthen trench designed to contain any spills or leaks within the trench and allow removal of residual spilled material and any contaminated earth. The tailings pipeline and the tailings return water line include leak detection systems, based on flow rate and pressure instrumentation that identifies sudden loss in pressure and/or flow differential, with continuous display and alarm indication to Processing personnel via the Citech SCADA system.

There are no significant sections of underground pipeline carrying cyanide process solutions at GSGM; only road crossings via open culverts. It is reasonable to expect that any leaks occurring within the culverts would be detected via visual inspection, in the event that the leak was not detected by either the differential flow or differential pressure leak detection systems.

Inspections are conducted on pipelines, bunds and process tanks where cyanide is used. The inspections are conducted by both processing and maintenance personnel in accordance with preventative maintenance schedules produced by SAP software, and within the PGI Master Schedule.

No areas exist where cyanide pipelines present a risk to surface water, as no cyanide pipelines exist in areas that may present such risk.

Cyanide tanks and pipelines are constructed of materials compatible with cyanide and high pH conditions.

The material of construction is mild steel for tanks and thickeners, with internal corrosion and wear resistant linings. Mild steel, High Density Polyethylene (HDPE), and in some cases stainless steel is used for pipelines. The processing facilities were constructed in accordance with the relevant Australian Standards, also taking into account Western Australian State Government Dangerous Goods licence requirements.

	THGIN	
Granny Smith Gold Mine		29 April 2022
Name of Mine	Signature of Lead Auditor	Date



# 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.

	$oxedsymbol{\boxtimes}$ in full compliance with	
The Operation is	$\square$ in substantial compliance with	Standard of Practice 4.8
	$\square$ not in compliance with	

# Summarize the basis for this Finding/Deficiencies Identified:

GSGM is in FULL COMPLIANCE with Standard of Practice 4.8: Implement quality control/quality assurance (QA/QC) procedures to confirm that cyanide facilities are constructed according to accepted engineering standards and specifications.

Quality control and quality assurance programs been implemented during construction of all new cyanide facilities and modifications to existing facilities, including cyanide unloading, storage, and other cyanide facilities. No cyanide mixing facilities exist at the Operation.

The only newly constructed facility or significant modification during the audit period was the TSF Cell 1 Wall Buttress. The construction was subject to a quality control and quality assurance program, as detailed within a Construction Completion Report, and Evidence of Completion Certificate. The Engineer of Record ensured that a Construction Quality Assurance Inspector was on site for a minimum of three days per week during construction works.

The quality control and quality assurance programs for the newly constructed cyanide facilities address the suitability of materials and adequacy of soil compaction for earthworks as applicable for the identified newly constructed facilities.

The design and construction records and reports for the TSF Cell 1 Wall Buttress address QA/QC programs including an Inspection and Test Plan by the Supervising Engineer, buttress foundation preparation, Drainage sump relocation works, monitoring bore decommissioning, geotextile placement and panel seaming, inspection of material placement to ensure segregation of materials did not occur, review of successive lift surveys, and conformance to design and specification of Construction Quality Assurance Inspector. Other QA/QC Records include Particle Size Distribution Test Certificates for Aggregate, and Atterberg Limits Test Certificates.

	THGIN	
Granny Smith Gold Mine		29 April 2022
Name of Mine	Signature of Lead Auditor	Date



GSGM continue to retain quality control and assurance records for design and construction of cyanide facilities.

As noted in the previous recertification audit report, QA/QC records have been retained for cyanide facilities in the form of comprehensive Manufacture's Data Reports, Project Completion Reports and Project Files containing QA/QC documentation. GSGM have demonstrated retention of QA/QC records for newly constructed facilities during the current audit period.

Cyanide Facility construction at GSGM has been reviewed by appropriately qualified personnel, including certified Civil, Geotechnical and Tailings Engineers, and the Construction Quality Assurance Inspector. Documentation exists verifying that facilities have been built as proposed and approved.

No non-compliances were recorded during the Construction Quality Assurance process.

The Engineer of Record's Construction Completion Report concludes, based upon monitoring and quality assurance activities undertaken by the Construction Quality Assurance Inspector and the Principal's Representative, that construction of the Cell 1 Buttress was completed in accordance with the design intent, construction drawings, and the technical specification for the works. The report is signed by a Senior Civil Engineer and Principal Geotechnical Engineer.

An Evidence of Completion Certificate for the Granny Smith Mine Tailings Storage Facility Cell 1 Buttress was issued on 10 August 2021. The certificate is signed by the Registered Mine of GSM Mining Company Pty Ltd, and the representative of the Engineer of Record, who is a current member of The Institution of Engineers, Australia.

Granny Smith Gold Mine		29 April 2022
Name of Mine	Signature of Lead Auditor	Date

THON



# **Standard of Practice 4.9:**

programs to evaluate the effects of ter quality.	cyanide use on wildlife,
☑ in full compliance with ☐ in substantial compliance with ☐ not in compliance with	Standard of Practice 4.9
	ter quality.  ☐ in full compliance with ☐ in substantial compliance with

# Summarize the basis for this Finding/Deficiencies Identified:

GSGM is in FULL COMPLIANCE with Standard of Practice 4.9: Implement monitoring programs to evaluate the effects of cyanide use on wildlife, surface and ground water quality.

GSGM have developed, maintain and implement a range of written standard procedures for monitoring activities. They exist in the form of overarching Environmental and Cyanide Management Plans and Standards, and in specific task procedures, including the Cyanide Management Plan, Tailings Management Plan, TSF Seepage and Groundwater Management Plan, Process Upset or Non-conformance Trigger Response Plan, Daily Plant Checks Procedure, Control of Cyanide Deficiency at Tailings Facility Procedure, Tailing Storage Facility – Inspect and Maintain Tailings Storage Facility Procedure, Groundwater Monitoring Procedure, TSF - Water and Weak Acid Dissociable (WAD) Sampling Procedure, multiple cyanide laboratory analytical procedures, Wildlife Monitoring Procedure, Wildlife Observation Daily Recording Procedure, Carcass Detection Procedure, Quarterly Bat Monitoring Procedure, Wildlife Monitoring - Balloon Deployment Procedure, and Monitor Tailings Dam Environment Training Resource Manual.

Sampling and analytical protocols have been developed by an appropriately qualified person.

The nominal level of qualification is tertiary environmental, chemistry or engineering qualifications, with sign-off of procedures by appropriately qualified Superintendents and Managers.

GSGM procedures specify how and where samples should be taken, sample preservation techniques, chain of custody procedures, shipping instructions, cyanide species to be analysed and quality assurance and quality control requirements for cyanide analyses.

	THGN	
Granny Smith Gold Mine		29 April 2022
Name of Mine	Signature of Lead Auditor	Date



The Monitoring Programme database outlines the frequency of sampling, species to be tested and has aerial photographs indicating the sampling locations. The procedures outline the sample preservation techniques, chain of custody procedures, shipping instructions, and cyanide species to be analysed. A site wide chain of custody form is in use.

Third party Consultants verify quality assurance and quality control for Code sampling requirements during quarterly assessments.

Sampling conditions (e.g., weather, livestock/wildlife activity, anthropogenic influences, etc.) and procedures are documented in writing.

Sampling conditions, livestock/wildlife activity, cloud cover, wind, precipitation, and temperature are recorded on monitoring field sheets and within the monitoring database.

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

Monitoring frequencies are recorded within the Cyanide Management Plan, the TSF Seepage and Groundwater Management Plan, and the Granny Smith Environmental Monitoring Programme Schedule. Monitoring occurs in accordance with the Granny Smith Environmental Monitoring Programme Schedule and the various monitoring procedures.

Monitoring results are reporting internally via monthly and quarterly reports, and reported externally within annual reports to regulatory authorities.

Monitoring compliance and adequacy is reviewed by third party experts on a quarterly basis.

	1 H GNOV	
Granny Smith Gold Mine		29 April 2022
Name of Mine	Signature of Lead Auditor	Date



#### 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:**

	procedures for effective decommission, wildlife and livestock.	oning of cyanide facilities to
The Operation is	<ul><li>☑ in full compliance with</li><li>☐ in substantial compliance with</li><li>☐ not in compliance with</li></ul>	Standard of Practice 5.1

# Summarize the basis for this Finding/Deficiencies Identified:

GSGM is in FULL COMPLIANCE with Standard of Practice 5.1: Plan and implement procedures for effective decommissioning of cyanide facilities to protect human health, wildlife and livestock.

GSGM has developed written procedures to decommission cyanide facilities at the cessation of operations. GSGM has developed a site wide Mine Closure Plan and a Decontamination and Decommissioning Plan for cyanide facilities which contains an implementation schedule for decommissioning activities which includes the Process Plant, Tailings Storage Facilities and Cyanide Storage facility.

The GSGM Decontamination and Decommissioning Plan includes an implementation schedule for decommissioning activities.

GSGM reviews its decommissioning procedures for cyanide facilities during the life of the operation and revise them as needed.

The Decontamination and Decommissioning Plan is reviewed every two years, and the Mine Closure Plan is reviewed every three years.

	1 H GNV	
Granny Smith Gold Mine		29 April 2022
Name of Mine	Signature of Lead Auditor	Date



# Standard of Practice 5.2:

Establish an assurance decommissioning act	re mechanism capable of fully funding ivities.	g cyanide related
The Operation is	<ul><li>☑ in full compliance with</li><li>☐ in substantial compliance with</li><li>☐ not in compliance with</li></ul>	Standard of Practice 5.2

#### Summarize the basis for this Finding/Deficiencies Identified:

GSGM is in FULL COMPLIANCE with Standard of Practice 5.2: Establish an assurance mechanism capable of fully funding cyanide related decommissioning activities.

GSGM has developed an estimate of the cost to fully fund third party implementation of the cyanide-related decommissioning measures as identified in its site decommissioning or closure plan.

GSGM has developed an estimate of the cost to fully fund third party implementation of the cyanide-related decommissioning measures as identified in its closure plan, using a closure plan model. Detailed costings for closure of cyanide facilities are estimated by a third party experts using a costings model, referred to as the Standardised Reclamation Cost Estimator. Costings are maintained in a Closure Costs Estimate report and associated Standardised Reclamation Cost Estimator Manual Models Verification spreadsheet.

GSGM continues to review and update the decommissioning costs on an annual basis using a third-party review of decommissioning costs. This annual review takes into account inflation and revisions to the closure plans that are made which effect cyanide-related decommissioning activities.

GSGM participate in the financial mechanism required by the applicable jurisdiction to cover the estimated costs for cyanide-related decommissioning activities as identified in its decommissioning and closure strategy.

The Government of Western Australia implemented a Mining Rehabilitation Fund (MRF) in 2014 for all mining operations in Western Australia. The Fund is managed by the Department of Mines, Industry Regulation and Safety (DMIRS). MRF imposes an annual levy of 1% of the estimated closure costs for rehabilitation of the existing disturbance on tenements. Participation in the Mining Rehabilitation Fund and payment of the levy is mandatory. GSGM participated fully in the Government of Western Australia's Mine Rehabilitation Fund during the audit period by paying annual

	THEN	
Granny Smith Gold Mine		29 April 2022
Name of Mine	Signature of Lead Auditor	Date



levies that take into account the degree of disturbance on the GSGM leases and closure costs.

Granny Smith Gold Mine

Signature of Lead Auditor

29 April 2022



#### PRINCIPLE 6 - WORKER SAFETY:

Protect workers' health and safety from exposure to cyanide.

# Standard of Practice 6.1:

Identify potential cya eliminate, reduce or a	nide exposure scenarios and take me control them.	asures as necessary to
The Operation is	<ul><li>☑ in full compliance with</li><li>☐ in substantial compliance with</li><li>☐ not in compliance with</li></ul>	Standard of Practice 6.1
Summarize the basis for this Finding/Deficiencies Identified:		

GSGM is in FULL COMPLIANCE with Standard of Practice 6.1: Identify potential cyanide exposure scenarios and take measures as necessary to eliminate, reduce and control them.

GSGM has developed procedures describing how cyanide-related tasks such as unloading, mixing, plant operations, entry into confined spaces, and equipment decontamination prior to maintenance should be conducted to minimize worker exposure. These are stored and accessed electronically within the GSGM document control system.

The GSGM integrated management system consists of primarily three levels of documentation, standards, plans and procedures/work instructions.

All GSGM operating procedures and work instructions for cyanide related activities identify personal protective equipment (PPE) requirements; provide specific PPE instructions where appropriate; and identify hazards and health and safety considerations. Procedures and work instructions include a task preparation section that includes pre-work inspections. The Cyanide Unloading Procedure identifies in the pre work inspections section that completion of a delivery checklist prior to the task is required.

The operation has developed effective hazard control measures and its safety management systems are effective in identifying any potential cyanide hazards. An example of this is in the area of confined space where there is a corporate standard, a site-based procedure and risk assessments and work instructions for particular tank entries for example.

	THGIN	
Granny Smith Gold Mine		29 April 2022
Name of Mine	Signature of Lead Auditor	Date



All personnel who work in operational areas are trained in field risk assessment techniques such as Take5's and Job Hazard Assessments.

GSGM solicits and actively considers worker input in developing and evaluating health and safety procedures, and when new cyanide related procedures are developed or periodically reviewed.

This consultation includes discussing the new or reviewed procedures in monthly Site Safety Committee meetings with safety representatives from all departments, management meetings, safety handover meetings and safety meetings crew changeover days. Formal and informal safety discussions are also held as part of Task observations, Task Observation Performed by Supervisors (TOPS) and Job Hazard Assessment (JHA). Formal risk assessment sessions are held annually to assess risks within the Processing plant and the risk management tools.

Granny Smith Gold Mine 29 April 2022

Name of Mine Signature of Lead Auditor Date



# **Standard of Practice 6.2:**

	or cyanide facilities to protect worker in te the effectiveness of health and safet	• •
The Operation is	<ul><li>☑ in full compliance with</li><li>☐ in substantial compliance with</li><li>☐ not in compliance with</li></ul>	Standard of Practice 6.2
	$\square$ not in compliance with	

#### Summarize the basis for this Finding/Deficiencies Identified:

GSGM is in FULL COMPLIANCE with 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.

GSGM has determined the appropriate pH for limiting the evolution of hydrogen cyanide gas during production activities. No cyanide mixing facilities exist at GSGM.

GSGM operates its Carbon-In-Leach facilities at a pH range of 9.9 to limit the evolution of hydrogen cyanide gas. Daily SG testing of the process water is undertaken to assist in determining the target pH and quicklime dosing rates in the Carbon-In-Leach circuit. GSGM undertakes routine activities to optimise pH dosing and control, including determination of process water salinity, process water specific gravity, protective alkalinity, and lime consumption. The GSGM Processing Plant utilises both manual and automatic pH measurement, with automatic pH probes installed within Carbon-In-Leach tanks. Automated control and lime dosing is implemented via process control instrumentation and dosing valves and displayed within the Plant Control operator interface system. The automated analysis is verified via manual pH determinations.

Access is restricted to the processing plant areas, with no one permitted to enter the processing plant area until the necessary inductions have been completed which includes the processing plant induction and cyanide awareness training unless they are escorted by a fully inducted person.

GSGM uses fixed (ambient) and personal hydrogen cyanide monitors to verify that controls are adequate to limit worker exposure to hydrogen cyanide gas from process slurries and solutions and confirm that controls are adequate to limit worker exposure to 10 parts per million on an instantaneous basis and 4.7 parts per million continuously over an 8-hour period. Red emergency flashing beacons are activated if the measured hydrogen cyanide concentration exceeds 4.7ppm.

	THEN	
Granny Smith Gold Mine		29 April 2022
Name of Mine	Signature of Lead Auditor	Date



No solid cyanide is used at GSGM for ore processing, and hence no monitoring occurs for cyanide dust.

GSGM procedures require a personal hydrogen cyanide monitor to be carried by all workers or visitors entering all areas of the processing facility where there is a potential for hydrogen cyanide gas to be present including on the Carbon-In-Leach tanks, elution area, trash and carbon safety screens, in-line reactor and in the tailings thickener area. Signage reminding personnel that they are entering these restricted areas remains in place. Personal hydrogen cyanide monitors continue to be issued in the Process Plant Permit Room and have been set to alarm at 4.7ppm and 10ppm for an instantaneous reading.

GSGM has identified areas and activities where workers may be exposed to cyanide in excess of 10ppm on an instantaneous basis and 4.7ppm continuously over an 8-hour period and require use of personal protective equipment in these areas or when performing these activities.

If a personal hydrogen cyanide monitor reaches 4.7ppm, an audible alarm is initiated and the worker is required to notify other Shift Supervisor, investigate the cause, and leave the area within 15 minutes. If Personal cyanide monitors show a reading of greater than 10ppm it is required that personnel leave area immediately, barricade the area to alert all other personnel of HCN hazard in area, and report to shift supervisor.

Hydrogen cyanide monitoring equipment is maintained, tested and calibrated as directed by the manufacturer, and records are retained for at least three years.

Fixed hydrogen cyanide monitors are calibrated as directed by the manufacturer on a quarterly basis. If units do not pass calibration they are replaced and sent to the manufacturer for refurbishment and calibration. Personal hydrogen cyanide monitors are bump tested on site at least once per shift cycle. If a personal hydrogen cyanide monitor fails a calibration test, it is taken out of use and serviced by the manufacturer. The manufacturer's personal hydrogen cyanide monitor docking stations are tested and calibrated off-site by a third party specialist in accordance with manufacturer's directions.

Warning signs are placed at appropriate locations where cyanide is used. Signage advises workers that cyanide is present, and that smoking, open flames and eating and drinking are not allowed, and that, if necessary, suitable personal protective equipment must be worn. Existence of appropriate warning signs was verified during field inspections.

	THEN	
Granny Smith Gold Mine		29 April 2022
Name of Mine	Signature of Lead Auditor	Date



All cyanide solutions delivered to site contain a Carmoisine red dye added to the solution. Consequently, all high strength cyanide solutions on site are clearly identifiable by this red dye.

Low pressure combination Safety shower/ eye wash stations and dry powder fire extinguishers are located at strategic locations throughout the operation and are maintained, inspected and tested on a regular basis.

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

Cyanide storage tanks containing high strength (>1%) cyanide solution are labelled by signage that identifies sodium cyanide solution, UN and HAZCHEM id numbers and a phone number for CSBP specialist advice. Process tanks including CIP Tanks, Elution Tanks and the ILR are also identified as containing cyanide through signage and labelling.

All piping carrying high strength cyanide solution is labelled "CYANIDE" and is painted lilac in colour. The "CYANIDE" label includes an arrow showing the flow direction.

GSGM also identifies lower strength cyanide process tanks and piping to alert workers of their contents and direction of flow. This is achieved via a combination of signage, labelling, training, and inductions.

Safety Data Sheets, first aid procedures or other informational materials on cyanide safety in the language of the workforce are available in areas where cyanide is managed.

GSGM maintains current English language Safety Data Sheets and first aid procedures at strategic site locations.

Procedures are in place and being implemented to investigate and evaluate cyanide exposure incidents to determine if the operation's programs and procedures to protect worker health and safety, and to respond to cyanide exposures, are adequate or need revising.

In the event of cyanide exposure incidents, GSGM incident investigation procedures include the requirement to evaluate and establish the root causes of incidents and the sufficiency of operational controls including procedures and training materials.

	1 HGVV	
Granny Smith Gold Mine		29 April 2022
Name of Mine	Signature of Lead Auditor	Date



# **Standard of Practice 6.3:**

worker exposure to	cyanide.	roceaures to respona to
	$oxedsymbol{ec{ox}}$ in full compliance with	
The Operation is	$\square$ in substantial compliance with	Standard of Practice 6.3
	$\square$ not in compliance with	

#### Summarize the basis for this Finding/Deficiencies Identified:

GSGM is in FULL COMPLIANCE with Standard of Practice 6.3: Develop and implement emergency response plans and procedures to respond to worker exposure to cyanide.

GSGM has water, oxygen, a resuscitator, radio and alarm system for communication and emergency notification readily available for use at the cyanide unloading and storage locations and elsewhere in the plant.

GSGM has a defined raising of emergency procedure. Audible alarms are established through the process plant to raise the alarm if high hydrogen cyanide gas or other emergencies are triggered, as well as local alarm displays within the Plant Control operator interface system. All personnel carry two-way radios so they can readily report on emergencies.

Potable water, oxygen and resuscitators are located at the cyanide unloading and storage area, Process Plant Control Room, and elsewhere in the plant. The cyanide antidote kit, which utilises Hydroxycobalamin, is stored in the nearby Process Plant/Admin Medical Centre.

GSGM inspects its first aid equipment monthly to ensure that it is available when needed; that materials such as cyanide antidotes are stored and/or tested as directed by their manufacturer; and replaced on a schedule to ensure that they will be effective when needed.

The Cyanide Kit Checklist is completed on a monthly basis by the Site Paramedic. The medical oxygen cylinders, resuscitators, ambulance equipment, and cyanide kit are checked on a monthly basis.

The oxygen resuscitators located within the processing area are inspected monthly and actions are identified as required.

All inspection reports are stored in hard copy and/or electronically.

	THGIN	
Granny Smith Gold Mine		29 April 2022
Name of Mine	Signature of Lead Auditor	Date



All Resuscitators, and medical equipment within the medical centres, are serviced on an annual basis by an external medical service provider, with relevant certification.

On call paramedic staff are provided with competency-based training in the use of the cyanide antidote kit, with supplementary external support by phone from a third party expert medical consultant, in the administration of cyanide antidotes.

GSGM has developed specific written emergency response plans and procedures to respond to cyanide exposures.

GSGM has a Cyanide Emergency Response Plan (CERP) and a site wide Emergency Management Plan (EMP) which contain first aid procedures to respond to worker exposure to cyanide.

GSGM has its own on-site capability to provide first aid or medical assistance to workers exposed to cyanide.

GSGM has a Medical Centre within the administration building close to the Process Plant. It is a double bed facility and has medications, medical consumables, antidote kits, and advance airway management kits, with the capability of responding to a cyanide exposure incident and a range of other emergencies. A paramedic is on 24 hour call at all times, with ancillary support from Emergency Response Team (ERT) medics who have training in advanced first aid. The operation's emergency response resources for cyanide exposures include a dedicated ambulance adjacent to the Processing Plant which contains a trauma kit, oxygen resuscitator, and also airway adjuncts for medical administration of oxygen by paramedics.

The cyanide antidote is Hydroxycobalamin, which is held under the care of the site paramedic in the Medical Centre. The cyanide antidote is only administered under the supervision of the site paramedic, and in consultation with nominated off-site support from medical doctors from Health Watch. GSGM also has a document Standing Orders for the Treatment of Cyanide Exposure which is to be followed if a cyanide antidote is to be administered.

GSGM has developed procedures to transport workers exposed to cyanide to locally available qualified off site medical facilities.

Transportation of a cyanide exposure patient to a medical facility is considered in the Cyanide Emergency Response Plan. The procedure addresses transport of a cyanide exposure casualty to the nearest hospitals, with instructions for both air and road transportation.

GSGM has made formalized arrangements with local hospitals, clinics, etc., so that these providers are aware of the potential need to treat patients for cyanide exposure. The operation is confident that the medical facility has adequate, qualified staff, equipment and expertise to respond to cyanide exposures.

	THGN	
Granny Smith Gold Mine		29 April 2022
Name of Mine	Signature of Lead Auditor	Date



GSGM has a formalised arrangement with Laverton, Leonora and Kalgoorlie Hospitals which has been notified of the potential for cyanide-related exposures. GSGM participates in emergency planning with off-site agencies through the Laverton Local Emergency Management Committee (LEMC) of which Laverton St Johns and the Shire of Laverton Police and Fire service are a part. Meetings are regularly held and attended by GSGM representatives.

Granny Smith Gold Mine

Name of Mine

Signature of Lead Auditor

29 April 2022



# **PRINCIPLE 7 – EMERGENCY RESPONSE:**

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

# **Standard of Practice 7.1:**

Prepare detailed eme	rgency response plans for potential (	cyanide releases.
The Operation is	<ul><li>☑ in full compliance with</li><li>☐ in substantial compliance with</li><li>☐ not in compliance with</li></ul>	Standard of Practice 7.1
Summarize the basis	for this Finding/Deficiencies Identif	ied:
	OMPLIANCE with Standard of Prace plans for potential cyanide releases.	•
GSGM has develope accidental releases of	d a Cyanide Emergency Response f cyanide.	Plan to address potentia
Management Plan (E Emergency Response Plan specifically for	Emergency Response Plan (CERP) and EMP) to guide responses to cyanide Plan provides additional detail to the responding to cyanide related ements and which contain area specific res	e emergencies. The Cyanide ne Emergency Management rgencies. GSGM also has a
failure scenarios ap circumstances: Cyan Transportation Accid Cyanide Spill Greater for scenarios. With	ency Response Plan considers the expropriate for its site-specific envide Related Injury; Hazardous Enemotes for scenario; Fires Involving (Than 20 kg; and Liquid Cyanide Spirespect to the solid cyanide spill sceives or mixes solid cyanide; however	rironmental and operating ergy Isolation for scenario Cyanide for scenario; Solic Ils Outside of Bunded Areas enario, the plan notes that
route(s), physical and truck), the condition	e to transportation-related emergend d chemical form of the cyanide, me of the road or railway, and the des e walled, top or bottom unloading).	thod of transport (e.g., rail
	THGIN	
Granny Smith Gold Mine		29 April 2022
Name of Mine	Signature of Lead Auditor	Date



GSGM's cyanide supply contracts with AGR specifies the responsibilities and response actions for transport related cyanide emergencies. Emergency response for off-site transportation incidents would be coordinated and conducted by and under the supplier's (AGR-CSBP's) emergency management procedures. Support from GSGM may be requested dependant on incident location. The CSBP Transport Management Plan for Sodium Cyanide Product provides information on transportation routes, physical and chemical form of the cyanide, method of transport, condition of road and railway and the design of the transport vehicle. GSGM has developed and implemented a cyanide transport incident response pre incident plan for scenarios that may occur once trucks are onsite.

GSGM Emergency Response Plans describe specific response actions (as appropriate for the anticipated emergency situations) such as clearing site personnel and potentially affected communities from the area of exposure, use of cyanide antidotes and first aid measures for cyanide exposure, control of releases at their source, and containment, assessment, mitigation and future prevention of releases.

The GSGM Tailings Management Plan contains the following Emergency Response Procedures relating to the Tailing Storage Facility and associated pipes, valves and pumps in Section 4: Over Topping of Water Storage Dams scenario; Tailings and Return Water Line Systems scenario; and Tailings Storage Embankment Failure.

The Cyanide Emergency Response Plan (CERP) and Emergency Management Plan are reviewed annually and have been reviewed and revised where appropriate over the period of certification.

The GSGM Emergency Management Plan (EMP), Cyanide Emergency Response Plan (CERP), and the Tailings Management Plan describe specific emergency response actions appropriate for the anticipated emergency situations including the clearing site personnel from the area of exposure.

Mitigation and monitoring of cyanide releases is considered in the Cyanide Emergency Response Plan (CERP) which provides a procedure for clean-up and decontamination of areas subject to a cyanide spill. It includes safety considerations and PPE required.

The GSGM CERP contains a Pre-Incident Plan for a cyanide related injury and a Pre-Incident Plan for Liquid Spills Outside a Bunded Area. The use of cyanide antidotes is described in the Standing Orders for the Treatment of Cyanide Exposure which is located in the Medical Facility.

Future prevention of cyanide releases following an incident is addressed through the GSGM Incident Safety and Health Incident Reporting and Investigation Standard which include methods to determine underlying causes of an incident and to implement additional controls or actions to prevent or reduce the likelihood of recurrence.

	THGW	
Granny Smith Gold Mine		29 April 2022
Name of Mine	Signature of Lead Auditor	Date



# **Standard of Practice 7.2:**

Involve site personne	and stakeholders in the planning pro	ocess.
The Operation is	<ul><li>☑ in full compliance with</li><li>☐ in substantial compliance with</li></ul>	Standard of Practice 7.2
Summarize the hasis	☐ not in compliance with  for this Finding/Deficiencies Identifi	ed·
GSGM is in FULL CON and stakeholders in t	MPLIANCE with Standard of Practice he planning process.	7.2: Involve site personnel
	its workforce and stakeholders, inc cyanide emergency response planning	= :
	continue to be involved in the em n in annual Emergency Management	
GSGM also involves	workers and provides avenues for fo	eedback and discussion on

GSGM also involves workers and provides avenues for feedback and discussion on cyanide emergency response planning in a number of other ways including through monthly Safety meetings and daily tool box meetings that discuss cyanide safety and environment incidents reviews of plans and procedures; risk assessment sessions; plant inductions; training in core procedures including cyanide hazard awareness; supervisor training including cyanide emergency first response.

GSGM has made potentially affected communities aware of the nature of their risks associated with accidental cyanide releases, and consulted with them directly or through community representatives regarding appropriate communications and response actions.

Examples of consultation include local community forum meetings, engagement with local Aboriginal groups, and participation in local shire and emergency response committees.

GSGM has involved local response agencies such as outside responders and medical facilities in the cyanide emergency planning and response process.

GSGM is a member of the Laverton Local Emergency Committee which provides a mechanism for GSGM to discuss and seek input to GSGM emergency response plans. The Local Emergency Management Committee includes Laverton St Johns and the Shire of Laverton Police and Fire service. Local Emergency Management Committee

	THGN	
Granny Smith Gold Mine		29 April 2022
Name of Mine	Signature of Lead Auditor	Date



meetings are held regularly and attended by a representative from GSGM, typically the Emergency Services Coordinator.

GSGM has a signed Memorandum of Understanding with Laverton. Leonora and Kalgoorlie Hospitals for the treatment of patients suffering from exposure or suspected exposure to cyanide. GSGM also has a signed Memorandum of Understanding with the Government of Western Australia Department of Fire and Emergency Services for the mutual support in planning and responding to emergency Incidents within the Laverton area and environs.

GSGM engage in consultation or communication with stakeholders to keep the Emergency Response Plan current.

GSGM engage with the Local Emergency Management Committee membership through quarterly meetings and periodic mock drills. The Local Emergency Management Committee includes the Shire of Laverton Police, Government of Western Australia Department of Fire and Emergency Services, St Johns and other local mining operations.

	THGIN	
Granny Smith Gold Mine		29 April 2022
Name of Mine	Signature of Lead Auditor	Date



# Standard of Practice 7.3:

emergency response	ate personnel and commit necessary e e.	equipment and resources fo
	oxdot in full compliance with	
The Operation is	$\square$ in substantial compliance with	Standard of Practice 7.3
	$\square$ not in compliance with	

#### Summarize the basis for this Finding/Deficiencies Identified:

GSGM is in FULL COMPLIANCE with Standard of Practice 7.3: Designate appropriate personnel and commit necessary equipment and resources for emergency response.

The GSGM Emergency Response Plan and the GSGM Cyanide Management Plan, in relation to cyanide elements of the plans, designate primary and alternative emergency response coordinators who have explicit authority to commit the resources necessary to implement the plans; identify emergency response teams, require appropriate training for emergency responders, include call-out procedures and references to 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, on site; include procedures to inspect emergency response equipment to ensure its availability; and describe the role of outside responders, medical facilities and communities in the emergency response procedures.

GSGM have confirmed that outside entities included in the Emergency Response Plan are aware of their involvement and are included as necessary in mock drills or implementation exercises.

Outside entities are familiar with GSGM's Cyanide Emergency Response Plan and Emergency Management Plan via the Laverton Emergency Management Committee (LEMC) which includes the Shire of Laverton and Laverton Police, Government of Western Australia Department of Fire and Emergency Services (DFES), St Johns and local mining operations. GSGM engages with the LEMC membership through regular meetings and communications as required.

GSGM continue to involve local response agencies through the Laverton Local Emergency Management Committee and Memorandum of Understanding (MOU) arrangements with Laverton, Leonora and Kalgoorlie Hospitals and the Government of Western Australia Department of Fire and Emergency Services (DFES). The Laverton

	THEN	
Granny Smith Gold Mine		29 April 2022
Name of Mine	Signature of Lead Auditor	Date



Local Emergency Management Committee includes which Laverton St Johns, the Shire of Laverton and Laverton Police and Fire service. Local Emergency Management Committee meetings are held regularly and attended by a representative from GSGM, typically the Emergency Services Coordinator. GSGM holds annual mock drills with and Local Emergency Management Committee representatives may attend or observe mock drills if appropriate and available.

Granny	Smith	Gold	Mine
--------	-------	------	------

Name of Mine



# **Standard of Practice 7.4:**

Granny Smith Gold Mine

Name of Mine

Develop procedures for internal and external emergency notification and reporting.				
	☑ in full com	pliance with		
The Operation is	$\square$ in substant	tial compliance	with	Standard of Practice 7.4
	$\square$ not in com	pliance with		
Summarize the basis	for this Findin	g/Deficiencies	Identifie	ed:
GSGM is in FULL CON internal and external				.4: Develop procedures for
Plan include proced	The GSGM Emergency Response Plan and the GSGM Cyanide Emergency Response Plan include procedures and contact information for notifying management, regulatory agencies, outside response providers and medical facilities of the cyanide emergency.			
The GSGM Cyanide Emergency Response Plan contains the process of notifying and communicating with off-site medical facilities such as the Royal Flying Doctor Service (RFDS), Poisons Information Centre and local Hospitals in Pre-Incident Plan 1. Appendix 5 of the CERP contains contact details for external medical including such as the RFDS, Poisons Information Centre, HealthWatch, Laverton St Johns and Laverton Hospital. Appendix 6 of the CERP includes instructions for contacting the Department of Mines, Industry Regulation and Safety (DMIRS).				
GSGM Emergency Response Plans include procedures and contact information for notifying potentially affected communities of the cyanide related incident through the Laverton LEMC and any necessary response measures, and for communication with the media.				
,	•	lans contain es; media intera		unication protocols for nd Next-of-Kin notification
occur as required in Laverton Shire Cour Department of Fire a the Emergency Resp	accordance wincil. The MOI and Emergency conse and Inc	th the mutual J with the Go Services outli Sident Manage	aid agre overnme nes legis ment St	tee of an emergency would ement which includes the ent of Western Australia slative responsibilities and tructure. Procedures for Emergency Managemen

29 April 2022



GSGM have a procedure for notifying the International Cyanide Management Institute (ICMI) of any significant cyanide incidents, as defined in ICMI's Definitions and Acronyms document. The procedure exists within the Cyanide Management Plan as Section 14 ICMI Notification Protocol, and also within the Cyanide Emergency Response Plan as Section 11 ICMI Notification Protocol. No significant cyanide incidents, as defined in ICMI's Definitions and Acronyms document, occurred during the audit period.

oranni, onnen oora mine	Granny S	mith Gold	Mine
-------------------------	----------	-----------	------

Name of Mine



# Standard of Practice 7.5:

account for the add	es monitoring elements tha ment chemicals.	
	$\ensuremath{\square}$ in full compliance with	
The Operation is	$\hfill\Box$ in substantial compliance with	Standard of Practice 7.5
	$\square$ not in compliance with	

#### Summarize the basis for this Finding/Deficiencies Identified:

GSGM is in FULL COMPLIANCE with 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 GSGM Cyanide Emergency Response Plan (CERP) describes specific remediation measures as appropriate for the likely cyanide release scenarios, and includes: Recovery or neutralisation of solutions or solids; decontamination of soils or other contaminated media, and; management and/or disposal of spill clean-up debris. The provision of an alternate drinking water supply is not applicable to the GSGM operation.

Remediation procedures contained within the CERP and Clean-up Minor Spill of Cyanide Procedure identify what treatment chemical is to be used and where it is stored; describe how the treatment chemical is to be prepared to the appropriate concentration; define the end point of the remediation, including how samples will be taken, what analysis will be performed, and what final concentration will be allowed in residual soil as evidence that the release has been completely cleaned up.

The GSGM Cyanide Emergency Response Plan prohibits the use of chemicals such as sodium hypochlorite, ferrous sulfate and hydrogen peroxide to treat cyanide that has been released into or near surface water. This plan also identifies the potential need and procedure for environmental monitoring to identify the extent and effects of a cyanide release, and include sampling methodologies, parameters and, where practical, possible sampling locations.

	1 H GVV		
Granny Smith Gold Mine		29 April 2022	
Name of Mine	Signature of Lead Auditor	Date	



# Standard of Practice 7.6:

Periodically evaluate needed.	response procedures and capabilities	s and revise them as	
The Operation is	<ul><li>☑ in full compliance with</li><li>☐ in substantial compliance with</li></ul>	Standard of Practice 7.6	
The operation is	□ not in compliance with	Standard of Fractice 7.0	
Summarize the basis for this Finding/Deficiencies Identified:			

GSGM is in FULL COMPLIANCE with Standard of Practice 7.6: Periodically evaluate response procedures and capabilities and revise them as needed.

GSGM review and evaluate the cyanide related elements of its Emergency Response Plan for adequacy on a regular basis.

The GSGM Emergency Management Plan and Cyanide Emergency Response Plan (CERP) are located in Controlled Documents and are reviewed annually. Automated reminders are sent out to the document owner to trigger a review. The current version of the Emergency Management Plan is dated 15 April 2021 with a review do be completed by 15 April 2022. The current version of the CERP is dated 03 July 2021 with a review do be completed by 03 July 2022.

GSGM conducted mock cyanide emergency drills annually in the audit period as part of the Emergency Response Plan evaluation process. Two cyanide emergency mock drills were conducted and debrief reports were produced. The audit period coincided with the revised requirement for annual mocks drills, which came into effect 01 September 2021. GSGM's drill schedule is compliant with previous requirement, and GSGM are aware of the revised requirement and scheduling annual drills to meet this requirement.

All mock drill documentation is lodged in INX including any actions that arise from mock drills.

GSGM conducts mock emergency drills periodically to test response procedures for various cyanide exposure scenarios. Lessons learned from the drills are incorporated into response planning. The drills involve emergency response personnel, plant personnel and medical staff.

Emergency Response Debriefs are conducted following each drill to identify deficiencies and lessons to be learnt, with subsequent incorporation into response planning.

	THGIN	
Granny Smith Gold Mine		29 April 2022
Name of Mine	Signature of Lead Auditor	Date



GSGM has provisions in place to evaluate and revise the Cyanide Emergency Response Plan and the Emergency Management Plan after any cyanide related incident or emergency.

Review of procedures and documents following an incident is driven by the incident investigation and reporting process as described in the Hazard / Incident Reporting and Investigation Guideline.

During the audit period, there were no cyanide related emergencies that required the implementation of the Emergency Response plan.

Granny Smith Gold Mine 29 April 2022

Name of Mine Signature of Lead Auditor Date



# **PRINCIPLE 8 – TRAINING:**

Name of Mine

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

Standard of Praction	ce 8.1:		
Train workers to und	lerstand the	hazards associated wit	h cyanide use.
	☑ in full c	ompliance with	
The Operation is	☐ in subs	tantial compliance with	Standard of Practice 8.1
	□ not in o	compliance with	
Summarize the basis	s for this Fin	nding/Deficiencies Iden	tified:
		E with Standard of Pr ed with cyanide use.	actice 8.1: Train workers to
GSGM continue to to recognition.	rain all pers	onnel who may encour	iter cyanide in cyanide hazard
training including s provided by cyanide Cyanide Awareness t	hort term suppliers AG raining inclu	contractors. The train GR and an equivalent sindes information on liqu	t complete cyanide awareness ing uses a training package te produced presentation. The uid sodium cyanide, the health d procedures to follow in the
undertake the Plant	Induction		in the processing area must Processing Induction includes nazard recognition.
refresher training is r automatically sent o weeks. Training dep	required evenut to person artment folertaken as r	ery 24 months and is trig nnel whose competen lows up with emails ar	records. Cyanide Awareness gered through INX with emails cy will be expiring within two nd escalation to supervisors if ad out refresher notifications
Granny Smith Gold Min	e	THGin	29 April 2022

Signature of Lead Auditor



Cyanide awareness training certificates provided to GSGM are retained electronically for the term of employment plus seven years for GSGM employees and for seven years for contractors.

**Granny Smith Gold Mine** 

Signature of Lead Auditor

29 April 2022



# Standard of Practice 8.2:

procedures that pro	otect human health, the community ar	nd the environment.
	☑ in full compliance with	
The Operation is	$\square$ in substantial compliance with	Standard of Practice 8.2
	$\square$ not in compliance with	

Train appropriate personnel to operate the facility according to systems and

#### Summarize the basis for this Finding/Deficiencies Identified:

GSGM is in FULL COMPLIANCE with 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.

GSGM conducts operational training for all workers performing cyanide-related tasks including normal production tasks, including: cyanide delivery, Carbon-In-Leach and leach operations, elution, equipment recontamination, tailings retreatment and management, hydrogen cyanide monitoring, and cyanide spill response.

The plant Induction provides an induction to the whole of the processing area and includes cyanide related topics such as hazard recognition and management, use of cyanide specific PPE, signage, and locations of safety showers and initiating emergency response. The processing area induction provides an understanding on the management cyanide hazards and risk management that underpins cyanide task training. A written assessment must be passed before the plant can be accessed unescorted.

Cyanide task training is based on the Buddy system where trainees are taught to perform cyanide related tasks by experienced operators.

Training elements necessary for each job involving cyanide management are identified in training materials.

Training materials used at GSGM identify the training elements necessary and task steps for each job involving cyanide. Training materials and document templates are accessed electronically by employees and trainers via the GSGM Controlled Document Environment. The training elements required for jobs involving cyanide are identified in training manuals which list core competencies for each relevant process area, including, reagents, leaching, elution, tails retreatment, and thickener and clarification. All cyanide related procedures and work instructions identify the purpose of the procedure, PPE requirements, hazards associated with the task and

	THGV	
Granny Smith Gold Mine		29 April 2022
Name of Mine	Signature of Lead Auditor	Date



requirements of the procedure. For work instructions the task is broken down into steps to be completed sequentially.

The core procedure must be completed before an employee can be deemed to be competent and work unsupervised in an area.

The procedures identify the purpose of the procedure, PPE required, hazards associated with the task and requirements of the procedure. For work instructions the task is broken down into steps to be completed sequentially.

Training & Assessment Documents are reviewed every 24 to 48 months or on an as needs basis if required on a shorter time frame.

Refresher training is undertaken every two years for the Plant Induction and for all cyanide-related core procedures.

The training Department uses InTuition to manage training requirements and records.

Training is undertaken by an authorised person who has been deemed competent in the procedure being assessed or by a Subject Matter Expert (typically the Supervisor) who holds competency in the procedure.

Upon competition of the training the supervisor must confirm that the Trainee has the required knowledge and to undertake the task. The supervisor can then authorise new employee to work without direct supervision.

Training occurs on day shift only.

GSGM evaluate the effectiveness of cyanide training by competency testing, task observation, and safety interactions.

GSGM retain records 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.

Granny Smith Gold Mine	1190	29 April 2022
ame of Mine Signature of Lead Auditor		Date

THOMO



# Standard of Practice 8.3:

Train appropriate workers and personnel to respond to worker exposures and environmental releases of cyanide.		
The Operation is	<ul><li>☑ in full compliance with</li><li>☐ in substantial compliance with</li><li>☐ not in compliance with</li></ul>	Standard of Practice 8.3

# Summarize the basis for this Finding/Deficiencies Identified:

GSGM is in FULL COMPLIANCE with Standard of Practice 8.3: Train appropriate workers and personnel to respond to worker exposures and environmental releases of cyanide.

Cyanide unloading, production and maintenance personnel at GSGM are trained in in the procedures to be followed if cyanide is released, including decontamination and first aid procedures.

Procedures to be followed if cyanide is released are included in the Cyanide Emergency Response Plan, Processing Plant Induction, Plan and Prepare for Mineral Processing Training Manual, Clean-up Minor Spill of Cyanide Procedure, and the Tailings Management Plan.

Everyone accessing the Mill un-escorted must undergo the Processing Area Induction which includes direction on how to respond to a chemical spill and the INX reporting requirements. All processing and maintenance personnel are trained in the Clean-up Minor Spill of Cyanide Procedure.

The Tailings Management Plan contains emergency response procedures in section 4 including discussion on response actions for small and large tailings embankment failures.

GSGM personnel, including unloading, production and maintenance workers and emergency response are trained in decontamination and first aid procedures.

GSGM receives only sodium cyanide solution, thus no cyanide mixing facilities exist at site.

The Processing Department (including Maintenance workers) had a high compliance rate for the Processing Plan Induction and Clean-up Minor Spill of Cyanide Procedure. More than 90% of all workers who were not identified as new starters or off-site had a compliant status for both.

	THGIN		
Granny Smith Gold Mine		29 April 2022	
Name of Mine	Signature of Lead Auditor	Date	



All personnel who access the plant, including cyanide unloading, production and maintenance personnel, receive Cyanide Awareness Training, which includes basic cyanide exposure first aid response, and thus are trained to provide such first aid until a shift member with Advanced First Aid and/or qualified Paramedic can attend and offer further aid and care.

A review of Advanced First Aid training across maintenance and shift crews showed that approximately 50% of personnel were competent in Advanced First Aid, and that coverage of first aid response across the various shift crews was adequate.

Refresher training is required for all plant personnel members every two years for all cyanide related procedures including in relation cyanide exposures and releases responding to cyanide exposures and releases. This includes the Clean-up Minor Spill of Cyanide Procedure; and Cyanide awareness which covers aspects of cyanide spill response.

Emergency Response Coordinators and members of the Emergency Response Team are trained in the procedures included in the Cyanide Emergency Response Plan including the use of necessary response equipment.

Weekly Emergency Response Team training includes HAZMAT training sessions with four sessions verified for 2019 and four sessions verified for 2021 covering all crews. HAZMAT training objectives which are consistent with training in Cyanide Emergency Response Plan emergency response procedures contained in the Cyanide Emergency Response Plan Pre-Incident Plans. Third party training courses in emergency response are also held periodically and contribute to Certificate III accreditation in Emergency Response and Rescue. A 'Render Hazardous Material Incident Safe' course was run over three days by West Rescue for ERT members from 25 to 27 September 2021. HAZMAT training sessions include cyanide scenarios but also drill other chemical hazard scenarios.

GSGM has made off-site Emergency Responders, such as community members, local responders and medical providers, familiar with those elements of the Emergency Response Plan related to cyanide.

Local external providers are familiar with GSGM's Emergency Management Plan for cyanide emergencies via the Laverton Local Emergency Management Committee (LEMC) which includes the Laverton Shire Council, Laverton Police, Government of Western Australia Department of Fire and Emergency Services (DFES), and Laverton St Johns.

GSGM has agreements with Laverton Hospital, Leonora Hospital, Kalgoorlie Hospital and DFES to provide support in the event of a cyanide incident requiring assistance or medical attention.

	THEN			
Granny Smith Gold Mine		29 April 2022		
Name of Mine	Signature of Lead Auditor	Date		



GSGM periodically conducts simulated cyanide emergency drills covering both worker exposures and environmental releases for training purposes. Drills are evaluated from a training perspective to determine if personnel have the knowledge and skills required for effective response. Training procedures are revised if deficiencies are identified.

GSGM tests response procedures and training adequacy for various cyanide exposure scenarios through periodic mock cyanide emergency drills which involve emergency response personnel, plant personnel and medical staff. Two cyanide exposure mock drills were conducted during the audit period, and included scenarios for both cyanide exposure and environmental release. Emergency Response Debriefs are conducted following each drill to identify deficiencies and lessons to be learnt. Recommendations are made and incorporated into training practices based on lessons learnt.

Cyanide Emergency Mock drill documentation (Debriefs) include the name of the trainer, date, the drill scenario and feedback.

Records are retained documenting the cyanide training, including the names of the employee and the trainer, the date of training, the topics covered, and how the employee demonstrated an understanding of the training materials

All documentation of cyanide training is retained electronically or on-site if in hard copy and includes the names of the employee and the trainer, the date of training, the topics covered, and how the employee demonstrated an understanding of the training materials.

All training records including documentation of mock drills and weekly ERT training (including HAZMAT training) are stored in INX and retained. All current hard copy records are stored on site however obsolete records are archived.

	THGIN		
Granny Smith Gold Mine		29 April 2022	
Name of Mine	Signature of Lead Auditor	Date	



#### **PRINCIPLE 9 – DIALOGUE:**

Engage in public consultation and disclosure.

# Standard of Practice 9.1:

Promote dialogue wi address identified co	th stakeholders regarding cyanide moncerns.	anagement and responsibly
The Operation is	<ul><li>☑ in full compliance with</li><li>☐ in substantial compliance with</li><li>☐ not in compliance with</li></ul>	Standard of Practice 9.1

#### Summarize the basis for this Finding/Deficiencies Identified:

GSGM is in FULL COMPLIANCE with Standard of Practice 9.1: Promote dialogue with stakeholders regarding cyanide management and responsibly address identified concerns.

GSGM continue to provide the opportunity for stakeholders to communicate issues of concern regarding the management of cyanide.

GSGM is in a regional location in Western Australia and the workforce flies in and out or lives in private housing in nearby Laverton. The site is located approximately 23 km south of the nearest communities, Laverton and Mt Margaret. The primary potentially affected stakeholders from a cyanide incident would be workers staying in the company camp approximately 1 km from the processing plant.

GSGM provides the opportunity for stakeholders to communicate issues of concern through direct engagement with Native Title holders on a regular basis including monthly meetings with the Mt Margaret community to inform on mine activities.

GSGM has produced a Cyanide Management at Granny Smith Gold Mine – Community Information Poster which has been placed on the Community Noticeboard at Laverton and is used at community forums and events. The poster is also included as an advertisement in the local Sturt Desert Pea community magazine on an annual basis. The advertisement also includes a GSGM contact email address and states; 'We Welcome Feedback, Voice a Concern, Make a Suggestion'.

	THGIN	
Granny Smith Gold Mine		29 April 2022
Name of Mine	Signature of Lead Auditor	Date



Engagement with workers regarding the management of cyanide, is through Cyanide Awareness and other Site Inductions, Task Training and Toolbox and Safety Meetings.

Annual Environment Reports are provided to the WA Department of Mines, Industry Regulation and Safety (DMIRS) as per regulatory requirements. These reports are available to the public once authorities have reviewed and authorised posting to their websites.

GSGM representatives regularly attend the Laverton Local Emergency Management Committee meetings which involve the Laverton Shire Council and emergency service providers. GSGM representatives regularly attend community events such as National Aborigines Day Observance Committee (NAIDOC) Week activities.

The Gold Fields website contains a 'Contact Us' Page, which contains corporate telephone, facsimile, and email contact details for sustainability, media, investment, and human resources inquiries. The page contains a link to contact details for regional offices, including Gold Fields Australia, which has telephone, facsimile, and email contact details. Goldfields Limited continues to post their annual Sustainability Report, which includes GSGM, on their website for public viewing. The Granny Smith Annual Environmental Report is publically available on the DMIRS website - the report notes reportable cyanide incidents.

https://www.goldfields.com/contact-details.php https://www.dmp.wa.gov.au/

Granny Smith Gold Mine

Signature of Lead Auditor

29 April 2022



# Standard of Practice 9.2:

Make appropriate of available to stakeho	operational and environmental inform olders.	ation regarding cyanide
	$\ensuremath{\square}$ in full compliance with	
The Operation is	$\square$ in substantial compliance with	Standard of Practice 9.2
	$\square$ not in compliance with	

# Summarize the basis for this Finding/Deficiencies Identified:

GSGM is in FULL COMPLIANCE with Standard of Practice 9.2: Make appropriate operational and environmental information regarding cyanide available to stakeholders.

GSGM has developed written descriptions of how their activities are conducted and how cyanide is managed, and these descriptions are available to communities and stakeholders.

GSGM has produced a Cyanide Management at Granny Smith Goldmine – Community Information Poster which has been placed on the Community Noticeboard at Laverton and is used at community forums and events. The poster is also included as an advertisement in the local Sturt Desert Pea community magazine on an annual basis. The advertisement also includes a GSGM contact email address and states; 'We Welcome Feedback, Voice a Concern, Make a Suggestion'.

There is no significant illiteracy in the local population in the region surrounding the operation. GSGM does however provide the opportunity for stakeholders to communicate issues of concern through direct engagement with Native Title holders on a regular basis including monthly meetings with the Mt Margret community to inform on mine activities.

GSGM maintain a Gold Fields standard internal and external reporting system for incidents, including those that involve cyanide. Cyanide incidents are reported in GSGM's Annual Environmental Report, which is publicly available on the DMIRS website. Releases (environmental and exposures) that cause applicable limits for cyanide to be exceeded are advised to regulatory authorities as required by the safety and environment incident reporting and investigation procedure. All mining operations within Western Australia are required to report serious occurrences and mining injuries (including cyanide exposures) to the Department of Mines, Industry Regulation and Safety on designated forms. Information regarding confirmed release

	THEN			
Granny Smith Gold Mine		29 April 2022		
Name of Mine	Signature of Lead Auditor	Date		



and exposure incidents as reported to	DMIRS a	are publically	available via	the I	DMIRS
wehsite:					

https://www.dmp.wa.gov.au/

No such incidents occurred during the audit period.

Granny Smith Gold Mine

Signature of Lead Auditor

29 April 2022



# **APPENDIX A: Important Information**

Important information and limitations concerning the preparation and submission of this Audit Report both in its complete and summarised forms.

Kindly take notice of the following important qualifications and limitations in connection with the preparation and submission of this report ("Report").

- 1. The Report has been prepared in good faith by the signatory for and on his own behalf and as an authorised representative of Veritas Metallica Pty Ltd ("VMPL");
- 2. The Report is intended for the exclusive use of Gold Fields Australia Pty Ltd ("Client").
- 3. It is not intended to be relied upon by any party other than the Client.
- 4. No permission is given by the author for reliance on this Report by any third party and the author takes no responsibility for publication thereof on any media by others.
- 5. The Report has been prepared on the basis of instructions, information and data supplied by the Client, and on the basis of the physical conditions and location of the site at which tests (if any) were undertaken.
- 6. The author of the Report gives no warranty or guarantee and makes no representation, whether express or implied, with respect to the content of this Report or the completeness or accuracy thereof.
- 7. No reliance should be placed upon anything other than that which is expressed in this Report.
- 8. The author of this Report accepts no responsibility or liability for any loss or damage suffered by any party which is incurred in reliance upon the contents of this Report. In particular and without limitation, the author shall not be liable for any loss or damage or economic loss suffered by any party which arises out of any of the contents of this Report or anything which is omitted from the contents of this Report.
- 9. Readers of this Report are alerted to the possibility that the conditions which existed at the time of the preparation of this Report may have changed both prior to and after the preparation of this Report and in no way does this Report encompass, take account of or refer to such changed conditions.

	1 H GNV			
Granny Smith Gold Mine		29 April 2022		
Name of Mine	Signature of Lead Auditor	Date		