March 2018

INTERNATIONAL CYANIDE MANAGEMENT CODE RECERTIFICATION AUDIT

PT Sago Prima Pratama (SPP) Gold Mine Certification Audit Report

Submitted to:
International Cyanide
Management Institute (ICMI)
1400 I Street, NW
Suite 550
WASHINGTON DC 20005
UNITED STATES OF AMERICA

REPORT

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SUMMARY AUDIT REPORT
FOR OPERATIONAL GOLD MINES

Name of Mine:	PT Sago Prima Pratama
Name of Mine Owner:	PT J Resources Nusantara
Name of Mine Operator:	PT J Resources Nusantara
Name of Responsible Manager:	Arissandi
Address:	Jl Sutanto RT 08 No 79, Kelurahan Nunukan Tengah, District Nunukan
State/Province:	North Kalimantan
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LOCATION DETAIL AND DESCRIPTION OF OPERATION:
PT J Resources Nusantara

PT J Resources Nusantara (JRN) as a subsidiary of PT J Resources Asia Pasifik Tbk. (J Resources) is an Indonesian owned intermediate gold producer with production capacity of approximately 250 000 ounces per annum.

JRN operates low grade-epithermal deposits and heap leach system for the gold mining projects and have eight sites in total. Four sites are in production phase: Bakan and North Lanut in North Sulawesi, Seruyung (SPP) in North Kalimantan, and Penjom in Pahang, Malaysia. Pani (Gorontalo, Sulawesi) and Doup (North Sulawesi) are in feasibility phase and Bolangitang (North Sulawesi) and Bulagidun (Gorontalo, Sulawesi) are in exploration phase.

SPP Gold Mine
PT Sago Prima Pratama

PT Sago Prima Pratama (SPP) is a Gold Mining subsidiary of JRN, and currently employs approximately 800 people. The mine boundary cover 3 560 ha, although the current disturbance footprint is less than this. SPP is located in North Kalimantan, Indonesia approximately 70 km downstream from the nearest community and 68 km upstream from the Nunukan Sub district office.

The operation commenced open pit mining in 2014. SPP operates a dynamic heap leach processing method using cyanide as its extraction agent and averages 10 million tonnes of material movement per year producing 90 000 ounces of gold per annum.

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Name of Facility	Signature of Lead Auditor	Date

SUMMARY AUDIT REPORT
AUDITORS FINDINGS

The SPP Gold Mine is:

☒ **in full compliance with**

☐ in substantial compliance with

☐ not in compliance with

The International Cyanide Management Code

Audit Company: Golder Associates

Audit Team Leader: Jaclyn Ennis-John, Lead Auditor and Technical Specialist

Email: jennis-john@golder.com

Name and Signatures of Other Auditors:

Name	Position	Signature	Date
Jaclyn Ennis-John	Lead Auditor and Technical Specialist		26 March 2018
Binafeda Harimundarti	Auditor		

Dates of Audit:

The Certification Audit site visit was conducted over three days between 2 and 5 November 2017.

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

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

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Name of Facility

Signature of Lead Auditor

26 March 2018
Date

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PRINCIPLE 1 – PRODUCTION

Encourage Responsible Cyanide Manufacturing by Purchasing from Manufacturers that Operate in a Safe and Environmentally Protective Manner

Standard of Practice 1.1: **Purchase cyanide from manufacturers employing appropriate practices and procedures to limit exposure of their workforce to cyanide, and to prevent releases of cyanide to the environment.**

The operation is

☒ **in full compliance with**

☐ in substantial compliance with **Standard of Practice 1.1**

☐ not in compliance with

Summarise the basis for this Finding/Deficiencies Identified:

SPP is in FULL COMPLIANCE with Standard of Practice 1.1, requiring the operation 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.

SPP has agreements to purchase its sodium cyanide (cyanide) from UNID Global Corporation (Formerly OCI Corporation) (UNID) and Hebei Chengxin Co. Ltd (Hebei) under Sales Contracts. UNID sources cyanide through TaeKwang Industrial Co (TaeKwang) which is also certified producer. Both agreements require the Seller to have a valid certification under the Code for the duration of the sales contract.

Hebei was recertified as being fully compliant with the Code on 16 December 2015.

TaeKwang was recertified as being fully compliant with the Code on 19 June 2017.

A review of delivery documents provided no evidence to suggest that SPP receives bulk delivery of cyanide from any other producers.

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PRINCIPLE 2 – TRANSPORTATION

Protect Communities and the Environment during Cyanide Transport

Standard of Practice 2.1: **Establish clear lines of responsibility for safety, security, release prevention, training and emergency response in written agreements with producers, distributors and transporters.**

☒ **in full compliance with**

The operation is ☐ in substantial compliance with **Standard of Practice 2.1**

☐ not in compliance with

Summarise the basis for this Finding/Deficiencies Identified:

SPP is in FULL COMPLIANCE with Standard of Practice 2.1, requiring that the operation establish clear lines of responsibility for safety, security, release prevention, training and emergency response in written agreements with producers, distributors and transporters.

SPP's contracts with its cyanide transporter designates some responsibilities for the transportation-related responsibilities identified by the Code.

The text of the contract does not specifically document all of the transportation responsibilities (a to l) listed in Standard of Practice 2.1 (question 1 and 2). PT Transcontinent as a cyanide transporter, has been certified under the Code on 2 December 2014 and recertified in 29 January 2018.

Transport from the certified producer Hebei is certified under two supply chains covering transport within China and a Global Ocean Supply Chain. Hebei Chengxin Transport was certified as compliant with the Code on 27 January 2017 and the Ocean Supply Chain was certified on 29 August 2017.

Transport from the certified producer TaeKwang is covered under UNID's South East Asian Supply chain which covers road transport from the production facility by certified road transporters to the Busan New Port and ocean transport to the Port of Surabaya. UNID's Southeast Asia Supply Chain was certified on 7 September 2017.

The certification audits of the cyanide transport activities assures that the designation of responsibilities during transport has been adequately addressed.

Standard of Practice 2.2: **Require that cyanide transporters implement appropriate emergency response plans and capabilities and employ adequate measures for cyanide management.**

☒ **in full compliance with**

The operation is ☐ in substantial compliance with **Standard of Practice 2.2**

☐ not in compliance with

Summarise the basis for this Finding/Deficiencies Identified:

SPP is in FULL COMPLIANCE with Standard of Practice 2.2, requiring that cyanide transporters implement appropriate emergency response plans and capabilities and employ adequate measures for cyanide management.

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SPP's contract with its cyanide transporter requires that the transporter be certified under the Code. Transcontinent was recertified as being fully compliant with the Code on 2 December 2014 and recertified on 29 January 2018.

Hebei Chengxin china supply chain was certified on 27 January 2017 and their global ocean supply chain was certified on 29 August 2017.

UNID's Southeast Asian Supply Chain was certified on 7 September 2017.

The operation has chain of custody records identifying all elements of the supply chain (producer and transporter) that handle the cyanide brought to its site.

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PRINCIPLE 3 – HANDLING AND STORAGE

Design and Construct Unloading, Storage and Mixing Facilities Consistent with Sound, Accepted Engineering Practices, Quality Control/Quality Assurance Procedures, Spill Prevention and Spill Containment Measures

Standard of Practice 3.1: **Design and construct unloading, storage and mixing facilities consistent with sound, accepted engineering practices, quality control/quality assurance procedures, spill prevention and spill containment measures.**

☒ **in full compliance with**

The operation is ☐ in substantial compliance with **Standard of Practice 3.1**

☐ not in compliance with

Summarise the basis for this Finding/Deficiencies Identified:

SPP is in FULL COMPLIANCE with Standard of Practice 3.1, requiring that the design and construction of unloading, storage and mixing facilities is consistent with sound, accepted engineering practices, quality control/quality assurance procedures, spill prevention and spill containment measures.

Facilities for mixing and storing cyanide have been designed and constructed in accordance with sound and accepted engineering practices for these facilities. As-built Drawings, Certificates of Compliance and Ready for Operation Certificates were provided for the cyanide mixing tank and bund wall and cyanide storage warehouse were also provided. These indicate that the cyanide facilities have been designed and constructed in accordance with sound and accepted engineering practices.

Unloading and Storage Areas are located away from people and surface waters. SPP has reviewed the distances from the facilities to the nearest permanent surface water body, nearest residential location (Accommodation Village) and nearest work office. Based on the distances recorded, operation has not considered it necessary to evaluate the potential for releases to surface water and/or human exposure.

Liquid cyanide is not unloaded at the facility.

SPP uses both automated and manual level indication on the cyanide mixing tank. There is an alarm system that alerts the Operators when the level has reached 95%. The Operators also manually inspect the level every three times a shift as part of the Operator Inspections.

The cyanide mixing tank and warehouse storage areas are located on a concrete surface that can prevent seepage to the subsurface. They have been designed and constructed to sit on concrete slab footings. Additionally, the cyanide mixing tank bund wall provides full concrete secondary containment.

An inspection of the secondary containments for cyanide storage and mixing tanks indicated that they were constructed of materials that provide a competent barrier to leakage.

The cyanide mixing tank is installed in the roofed plant area that is open on all four sites to allow for ventilation and away from occupied areas. It is located within a fenced area and a locked, manned gate prevents unauthorised access to the area. Bunding prevents mixing with incompatible materials.

The cyanide storage warehouse allows for ventilation through mesh installed at the top of all walls and manual extractor fans on the roof. It has been designed to prevent contact with water and locked to prevent unauthorised access and prevent mixing with incompatible materials.

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Standard of Practice 3.2: **Operate unloading, storage and mixing facilities using inspections, preventive maintenance and contingency plans to prevent or contain releases and control and respond to worker exposures.**

☒ **in full compliance with**

The operation is ☐ in substantial compliance with **Standard of Practice 3.2**

☐ not in compliance with

Summarise the basis for this Finding/Deficiencies Identified:

SPP is in FULL COMPLIANCE with Standard of Practice 3.2 requiring that cyanide handling and storage facilities are operated using inspections, preventive maintenance and contingency plans to prevent or contain releases and control and respond to worker exposures.

SPP prevents the empty cyanide containers from being used for any purpose other than holding cyanide. Empty cyanide boxes and (cleaned) used bags are disposed of at a separate section of the Waste Rock Dump.

The *Cyanide Mixing Task Procedure* require that following cyanide mixing, liners are to be rinsed with water three times. The effluent is collected in the mixing tank containment sump and pumped back into the tank. Rinsed bags are placed back into the empty cyanide boxes for transportation.

Task Procedures have been developed covering the mobilisation of the cyanide containers and mixing and storing of cyanide. They detail the steps necessary to safely and correctly transport cyanide boxes and mix cyanide solution; and the operation of all valves and couplings for transporting cyanide and mixing solid cyanide.

The Cyanide boxes are mobilised following the Task Procedures. Boxes are staked two high within the locked warehouse facility. Rupturing or puncturing of containers is avoided by transporting one box at a time.

Procedures are in place to promptly clean up spills during the mixing process and require the presence of an observer during the mixing process and during transportation.

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PRINCIPLE 4 – OPERATIONS

Manage Cyanide Process Solutions and Waste Streams to Protect Human Health and the Environment

Standard of Practice 4.1: **Implement management and operating systems designed to protect human health and the environment including contingency planning and inspection and preventive maintenance procedures.**

☒ **in full compliance with**

The operation is ☐ in substantial compliance with **Standard of Practice 4.1**

☐ not in compliance with

Summarise the basis for this Finding/Deficiencies Identified:

SPP is in FULL COMPLIANCE with Standard of Practice 4.1, requiring that the operation implement management and operating systems designed to protect human health and the environment including contingency planning and inspection and preventive maintenance procedures.

Written management and operating plans or procedures have been developed for areas of the operation that involve cyanide solutions greater than 0.5 mg/L WAD cyanide.

J Resources has developed Corporate Standard Operating Procedures for Key cyanide related tasks. SPP has then developed site-specific Task Procedures (TP) and Work Instructions (WI) for common tasks and uses Job Safety Analysis (JSA) for assessing and documenting steps and controls for non-routine activities. The JSA process is also used as an assessment tool to evaluate low level changes in the management of change process.

TPs and WI have been developed for all cyanide related activities from transport of the product, operation (irrigation, leak detection, mixing, rinsing), mining (destacking ore, management of the pads, ploughing, trenching), decontamination, laboratory and contingency planning (spills, water monitoring, water management pond, process clean water, groundwater wells)

The TPs detail the hazards, personal protective equipment (PPE) and actions to be taken to undertake the task in a safe manner and prevent exposure.

The operation has plans and procedures that identify the assumptions and parameters on which the facility designs were based and applicable regulatory requirements as necessary to prevent or control cyanide releases and exposures consistent with applicable requirements. The *Operational Strategy and KPI* is a key document that lists requirements for each cyanide facility.

Key Corporate SOP, TPs and WI outline the specific measures for Code compliance including safe and environmental sound operation of the facility, including inspection requirements.

All process and pond pumps, pipes, valves and tanks are registered within a yearly Preventative Maintenance Spreadsheet. Specific maintenance tasks and associated frequencies have been assigned for each item. The tasks and frequencies were initially set by the Maintenance Planners using the recommendations contained within the equipment manuals. The tasks and frequencies were later adjusted based on observations made when conducting the tasks as well as experience gained during Work Orders raised from inspections.

The Change Management procedure outlines the principles and process for use at SPP to manage proposed changes on site.

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Once the requirement for Change Management is identified, the proposed changes must go through the Approval Sheet process. This process incudes objectives of new design; hazard identification, risk assessment and controls; review by key departments; figures and diagrams of change.

The Cyanide Emergency Response Plan (CERP) details procedures for situations related to upsets in the operation of the facility. The Decommissioning Plan details the process of cessation of operations and decontamination. The Environmental Manager, who has a key role in crisis management and emergency response, advised that in the case of the temporary closure or cessation of processing the decommissioning plan would be referred to. Site procedures also contain contingency information.

The operation does inspect cyanide facilities on an established frequency sufficient to assure and document that they are functioning within design parameters. All process and pond pumps, pipes, valves and tanks are registered within a yearly Preventative Maintenance Spreadsheet. Specific maintenance tasks and associated frequencies have been assigned for each item. Frequencies are daily, weekly, monthly and 3-monthly.

The inspections are guided by inspection sheets that prompt the inspector to check specific items within the area being inspected. Daily checks are observation only for any obvious faults, monthly and 3-monthly are completed by electrical and mechanical operator combined. Three daily checks are completed each shift. Any observations requiring follow up actions raised on a Work Orders.

Tanks holding cyanide solutions are inspected for structural integrity and signs of corrosion and leakage. SPP has adopted relevant Preventative Inspection frequencies all tanks containing cyanide solution. In addition to scheduled maintenance inspections, the body of the mixing tank is checked three times a shift as part of routine operator inspections.

SPP inspects secondary containments for their integrity, the presence of fluids and their available capacity, and to ensure that any drains are closed to prevent accidental releases to the environment. This is conducted and recorded three times a shift as part of routine operator checks.

A manual leak detection system is installed under every pond containing cyanide solution.

Included within the daily operator inspection sheets is the requirement check for leaks of the pond liner.

Groundwater monitoring bores are installed around the perimeter of the ponds. These are monitored every quarter.

Pumps, pipes, valves and tanks of key cyanide areas are listed on the relevant daily inspection sheets. These are conducted and recorded three times a shift as part of routine operator checks.

Freeboards for the TSF and polishing ponds are inspected on a daily basis to confirm that they are still within the design limits.

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 also documented, and records are maintained. All documentation reviewed contained the name of the inspector, the reviewer of the inspection form, and the date of the inspection. If required, they include a description of the deficiency and immediate corrective action. Records are as hard copy. Examples were provided for the Auditors review.

SPP has determined what equipment is critical in preventing releases and exposures and included it in its preventative maintenance and inspection schedules.

The operation does have 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.

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SPP has five generators onsite to provide power to the operation. This allows, at all times, to have two generators operational, two generators as standby and one in service. The standby generators can be operational within three seconds of power supply issues and will automatically operate once power requirements exceed 85% of capacity.

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

☒ **in full compliance with**

The operation is ☐ in substantial compliance with **Standard of Practice 4.2**

☐ not in compliance with

Summarise the basis for this Finding/Deficiencies Identified:

SPP is in FULL COMPLIANCE with Standard of Practice 4.2, requiring that the operation limit the use of cyanide so that the waste material has as low a cyanide concentration as practical.

SPP has implemented a program to determine the appropriate cyanide addition rates to the heap leach. The Senior Metallurgist recently completed a revised assessment of the ore and blending rates for optimal cyanide injection. This was completed through a review of sampling and column tests. The operation now has revised target injection based on a blended ore ratio.

SPP has evaluated various control strategies for cyanide addition.

At commencement of operations there was an initial testing rate determined based on trial performance, throughout operations additional testing has occurred and addition rates and ore ratios have been adjusted.

SPP has implemented a strategy to control its cyanide addition. Sampling is taken four hourly of the PLS pond and flow through the Launder. Sampling includes pH, cyanide concentration, gold content and base metals. This allows the operation to monitor cyanide usage and gold recovery and amend the ore blending or cyanide addition as required.

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

☒ in full compliance with

The operation is ☐ **in substantial compliance with** **Standard of Practice 4.3**

☐ not in compliance with

Summarise the basis for this Finding/Deficiencies Identified:

SPP is in FULL COMPLIANCE with Standard of Practice 4.3; implement a comprehensive water management program to protect against unintentional releases.

SPP has developed a comprehensive and probabilistic water balance.

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The water balance has been developed based on the minimum and maximum levels of each pond determined during construction, allowing for an amount of freeboard applicable to the site and management strategies. The water balance can be adjusted to reflect the current site operation; it considers the following inputs in a reasonable manner for the site setting:

- Solution application rates applied to the heap leach. This is based on the current application rates determined by Senior Metallurgist.
- 100-year 24-hour storm event, which can be altered for other storm events calculated by hydrologist. (1, 2, 5, 10, 20, 50 and 100 year durations)
- Precipitation and evaporation data collected from site weather conditions stations since the Operations commencement. Evaporation is a constant at 5 mm/year.
- 12-hour power outage. SPP has five generators in rotation to operate the critical components at the cyanide facilities in the event of a power outage. The standby generators can be operational within three seconds of power supply issues and will automatically operate once power requirements exceed 85% of capacity.
- Capacity for the detox system has been included and can be utilised in the water balance during the wet months when detox is required prior to discharge to surface waters. The Water Balance can also provide how many days or water is remaining as part of its functionality to assist in the dry months
- Run-off is not applicable to the site as the ponds are constructed at a higher level to prevent runoff entering. All flow is directed to the SWP.
- Freezing and thawing conditions is not applicable and there not included.

SPP has designed and operates their ponds with adequate freeboard based on the Water Balance and related calculations.

The Process Plant Manager stated that all ponds are designed to be at full capacity (based on design calculations and water balance) at 750 mm below the lip of the pond. Every two hours during a shift the Operators visually inspect the level of the ponds and once daily they complete a proper measurement from the lip of the pond. These inspections confirm that the levels are within the required minimum and maximum levels for operation.

SPP measures precipitation and compares this the water balance assumptions. The water balance has the ability to be adjusted accordingly.

SPP uses a site based rainfall gauge and an online monitoring system to review the recordings. The gauge is located at Heap Leach Pad 1 and has been recording data since production commenced.

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

☒ **in full compliance with**

The operation is ☐ in substantial compliance with **Standard of Practice 4.4**

☐ not in compliance with

Summarise the basis for this Finding/Deficiencies Identified:

SPP is in FULL COMPLIANCE with Standard of Practice 4.4, requiring that the operation implement measures to protect birds, other wildlife and livestock from adverse effects of cyanide process solutions.

SPP has implemented measures to restrict access by wildlife to open waters where WAD cyanide exceeds 50 mg/L WAD cyanide.

The Pregnant, Intermediate, Barren, Rinsing and Detox ponds are netted. SPP also installs paranet at identified ponding areas, paranet is a portable cover which can be placed over the ponding spots in the heap leach pads or at the Landuer. The Surface Water Ponds (SWPs) are not netted because it contains <50 mg/L WAD cyanide. Environmental test report issued by Intertek in April and Jul 2017 show that the WAD cyanide concentration were <50 mg/L.

Maintaining a WAD cyanide concentration of 50 mg/L or less in open waters has prevented significant wildlife mortality. SPP has started bird mortality checks in July 2017 and has not recorded any cyanide wildlife mortalities.

SPP has a procedure (*Pengaturan Level Pond*) that details options to eliminate ponding. Minor ponding was observed during the site visit and interviews confirmed that the ponding observed was occurred due to the clay-type of ores and actions were being taken (in accordance with the procedure) to eliminate ponding.

Ponding and overspray is checked as part of the daily check lists and recorded on the log sheets.

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

☒ **in full compliance with**

The operation is ☐ in substantial compliance with **Standard of Practice 4.5**

☐ not in compliance with

Summarise the basis for this Finding/Deficiencies Identified:

SPP is in FULL COMPLIANCE with Standard of Practice 4.5, requiring that the operation implement measures to protect fish and wildlife from direct or indirect discharges of cyanide process solutions to surface water.

SPP discharges to surface water via WMP2 (Water Monitoring Point) to Seruyung River, the nearest surface water source which is approximately 3 km to the north west. Following the local regulation, SPP obtained a wastewater discharge permit that defined the mixing zone area. Referring to the Permit, the concentration of free cyanide at the downstream area is established as 0.022 mg/L.

SPP monitoring results reviewed reported free cyanide less than 0.022 mg/L.

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Standard of Practice 4.6: **Implement measures designed to manage seepage from cyanide facilities to protect the beneficial uses of groundwater.**

☒ **in full compliance with**

The operation is ☐ in substantial compliance with **Standard of Practice 4.6**

☐ not in compliance with

Summarise the basis for this Finding/Deficiencies Identified:

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

SPP has implemented preventative maintenance and monitoring measures to manage seepage to protect the beneficial uses of the groundwater beneath and/or immediately downgradient of the operation.

All leach pads are lined with HDPE liner to prevent seepage. Each pond is double lined and has leak detection and monitoring system installed between the liners. Seepage is also monitored through eight groundwater bores surrounding the mine site.

The groundwater bores are monitored weekly for free cyanide. Based on monitoring results reviewed, the analysis reported 0 ppm. Similarly, free cyanide monitoring of leak detection between the under-pond liners, which was conducted twice a week, also reported 0 ppm.

On quarterly basis, SPP sends groundwater samples to Intertek for WAD cyanide analysis. Environmental test analysis reports WAD cyanide concentration less than the limit or reporting (LOR) of 0.05 mg/L.

No groundwater extraction activities conducted within the site operation.

The operation does not use mill tailings as underground backfill.

The operation advised there are no defined beneficial use of groundwater in the area and monitoring indicates there is no cyanide impacts to groundwater.

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

☒ **in full compliance with**

The operation is ☐ in substantial compliance with **Standard of Practice 4.7**

☐ not in compliance with

Summarise the basis for this Finding/Deficiencies Identified:

SPP is in FULL COMPLIANCE with Standard of Practice 4.7 requiring that the operation provide spill prevention or containment measures for process tanks and pipelines.

SPP has spill containment measures for all of the cyanide-related storage, mixing and process tanks. The secondary containments of the Process Plant, Detox Area and Pond Areas (including pumps pipe work) have all been designed and constructed with secondary containment measures. All tanks have been designed and constructed with solid concrete bases under the tank floor. All pipes containing cyanide with a solution greater than 0.5 mg/L have been double wrapped with HDPE liner. Any leaks are collected through tertiary pipes installed between the layers that flow to the nearest PLS or BLS pond. This was confirmed during the site inspection.

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The above containments were observed to be in good condition and suitable for use. The auditors also reviewed design, as-built, QA/QC documentation confirming they were built as construction requirements.

SPP has adequately sized spill containment measures for all of the cyanide-related storage, mixing and process tanks.

Calculations have been completed for all secondary containment on site; and signage stating the volumes is displayed on the tanks and bunds. The Process Plant Manager confirmed that the bunding size was appropriate for the tanks held.

SPP has implemented procedures to prevent discharge to the environment of any cyanide solution or cyanide-contaminated water that is collected in the secondary containment area. All sumps are designed to pump back into the tanks located in the area collected.

Procedures for remediation of any contaminated are not specifically required as all cyanide storage and process tanks have been designed and constructed with secondary containment measures.

Areas where cyanide pipelines present a risk to surface water have not been specifically evaluated for special protection needs. Instead, SPP has double wrapped pipes containing cyanide with a solution greater than 0.5 mg/L with HDPE liner.

Cyanide tanks and pipelines are constructed of materials compatible with cyanide and high pH conditions. Materials used include carbon steel, glass flake epoxy and high-density polyethylene, which are suitable for the conditions.

Standard of Practice 4.8: **Implement quality control/quality assurance procedures to confirm that cyanide facilities are constructed according to accepted engineering standards and specifications.**

☒ **in full compliance with**

The operation is ☐ in substantial compliance with **Standard of Practice 4.8**

☐ not in compliance with

Summarise the basis for this Finding/Deficiencies Identified:

SPP is in FULL COMPLIANCE with Standard of Practice 4.8 requiring that operations implement QA/QC procedures to confirm that cyanide facilities are constructed according to accepted engineering standards and specifications.

QA/QC programs have been implemented for all cyanide facilities. The auditors reviewed record of construction reports for cyanide facilities, which included signed as built drawings, QA/QC completion reports, QA/QC testing results, and Commission Packages.

SPP has implemented QA/QC programs that address the suitability of materials, adequacy of soil compaction for earthworks, and installation of geomembrane liners. QA/QC documentation describe the parties involved, QA/QC activities and testing, design modifications, and as built drawings. For the elements where full QA/QC documents were not available a suitably qualified SPP Engineer provided confirmation that the facility was constructed as required by the design drawings.

SPP has retained appropriate documentation for the applicable cyanide facilities. The Auditor observed copies of appropriate documentation.

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Appropriately qualified personnel reviewed and approved the construction of the SPP project. SPP confirmed that QA/QC testing documentation for the facilities were reviewed and approved by licensed professional engineers. For the elements where full QA/QC documents were not available a suitably qualified SPP Engineer provided confirmation that the facility was constructed as required by the design drawings.

Standard of Practice 4.9: **Implement monitoring programs to evaluate the effects of cyanide use on wildlife, surface and groundwater quality.**

☒ **in full compliance with**

The operation is ☐ in substantial compliance with **Standard of Practice 4.9**

☐ not in compliance with

Summarise the basis for this Finding/Deficiencies Identified:

SPP is in FULL COMPLIANCE with Standard of Practice 4.9 requiring that operations implement monitoring programs to evaluate the effects of cyanide use on wildlife, surface and groundwater quality.

SPP has developed written standard procedures and also refers to Corporate (JRN) procedures for monitoring activities. Interviews with the Sampling Operator confirmed his understanding of the sampling procedures.

Sampling and analytical procedures have been developed by appropriately qualified personnel in EHS Department. The monitoring program is aligned with the approved environmental management and monitoring documents as a sub set document of Environmental Impact Assessment.

The SPP sampling and monitoring procedure describes the compliance point, sampling point and the sampling frequency. The procedure also details sampling methodology, containers, tools and equipment, sample identification, sample storage, preservation and holding time.

Sampling conditions and procedures are documented in writing.

SPP does have a direct discharge to surface water. It monitors surface water downgradient of the site as well as groundwater bores surrounding the ponds and downstream of the operation. Leak detection monitoring is also undertaken as a preventive measure.

Monitoring is conducted at frequencies adequate to characterise the medium being monitored and to identify changes in a timely manner; with higher risk areas being sampled at least daily. Monitoring includes wildlife mortalities.

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PRINCIPLE 5 – DECOMMISSIONING

Manage Cyanide Process Solutions and Waste Streams to Protect Human Health and the Environment

Standard of Practice 5.1: **Plan and implement procedures for effective decommissioning of cyanide facilities to protect human health, wildlife and livestock.**

☒ **in full compliance with**

The operation is ☐ in substantial compliance with **Standard of Practice 5.1**

☐ not in compliance with

Summarise the basis for this Finding/Deficiencies Identified:

SPP is in FULL COMPLIANCE with Standard of Practice 5.1, requiring that a decommissioning plan is developed and implemented for effective closure of cyanide facilities to protect human health, wildlife and livestock.

SPP has developed a Cyanide Facilities Decommissioning Plan for the Seruyung Site which details the actions to be taken at cessation of operations and addresses all cyanide facilities.

The Cyanide Facilities Decommissioning Plan contains an implementation schedule for decommissioning activities that commences two years prior to closure and concludes 12 months post-closure.

SPP established the plan in 2013 and revised it in 2016. SPP will review its decommissioning procedures for cyanide facilities during the life of the operation and revise them as needed.

Standard of Practice 5.2: **Establish an assurance mechanism capable of fully funding cyanide related decommissioning activities.**

☒ **in full compliance with**

The operation is ☐ in substantial compliance with **Standard of Practice 5.2**

☐ not in compliance with

Summarise the basis for this Finding/Deficiencies Identified:

SPP is in FULL COMPLIANCE with Standard of Practice 5.2, requiring that operation establish an assurance mechanism capable of fully funding cyanide related decommissioning activities.

SPP has developed an estimate of the cost to fully fund third party implementation of the cyanide-related decommissioning measures as identified in its Cyanide Facilities Decommissioning Plan.

The decommissioning costs have been calculated on a domain by domain basis to align with the local regulatory Mine Rehabilitation Fund framework (Minister of Energy and Mineral Resources Decree 7/2014).

The Cyanide Facilities Decommissioning Plan states that a review of decommissioning cost estimates is conducted every five years and when revisions are made to the cyanide decommissioning plan

SPP has established a cost estimate of the cyanide related decommissioning facilities. A post-mining guarantee is placed in the form of a Futures Oeposito on behalf of the Governor Kalimantan Utara qq PT Sago Prima Pratam.

The required deposit amounts for 2015, 2016 and 2017 guarantees values have been paid.

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PRINCIPLE 6 – WORKER SAFETY

Protect Workers' Health and Safety from Exposure to Cyanide

Standard of Practice 6.1: **Identify potential cyanide exposure scenarios and take measures as necessary to eliminate, reduce and control them.**

☒ **in full compliance with**

The operation is ☐ in substantial compliance with **Standard of Practice 6.1**

☐ not in compliance with

Summarise the basis for this Finding/Deficiencies Identified:

SPP is in FULL COMPLIANCE with Standard of Practice 6.1, requiring that operation identifies potential cyanide exposure scenarios and takes measures as necessary to eliminate, reduce and control them.

SPP has developed operational procedures related to cyanide tasks that describe how to minimise worker exposure.

SPP undertakes HIRA (Hazard Identification Risk Assessment and Control) for all areas to include staging, storage, process plant, HLP, laboratory, detox, hauling, water treatment and fieldwork activities.

The risks identified are then assessed whether a work instruction (WI) or task procedures (TP) is required to be developed. The assigned risks category guides to what risks needed to be addressed in each procedure.

All cyanide related tasks are allocated a category rank of very high (AA), high (A) and therefore require development of a procedure. SPP has specific procedures for all cyanide related activities. Each procedure details the task scope; PPE required; task steps for preparation and implementation of the task.

At the end of each task, for activities with High or Very High ratings, there is discussion about the activity and any comments which will be put on the Planned Task Observation (PTO), recording both the positive and negative findings. SPP conducts training or socialisation to ensure workers are understand the procedures. Workers' comments are welcomed and discussed. Inputs are also collected from the PTO.

Standard of Practice 6.2: **Operate and monitor cyanide facilities to protect worker health and safety and periodically evaluate the effectiveness of health and safety measures.**

☒ **in full compliance with**

The operation is ☐ in substantial compliance with **Standard of Practice 6.2**

☐ not in compliance with

Summarise the basis for this Finding/Deficiencies Identified:

SPP is in FULL COMPLIANCE with Standard of Practice 6.2, requiring that operation operates and monitors cyanide facilities to protect worker health and safety and periodically evaluate the effectiveness of health and safety measures.

The operation has determined the appropriate pH for limiting the evolution of HCN gas during mixing and production activities. SPP has a target pH of 10-11. SPP undertakes on flow and off flow sampling every two hours to confirm the target pH, as well as conducting a lime test. The lime is added to the ore prior to placement on heap leach.

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Where the potential exists for significant cyanide exposure, the operation uses both fixed and portable monitoring devices to confirm that controls are adequate to limit worker exposure to HCN gas. A fixed monitor is located above the cyanide mixing tank and the requirement for a portable monitor is listed as part of the JSA/TP PPE requirements.

Portable HCN monitors are maintained, tested and calibrated as per manufacturer requirements. SPP determines calibration schedule for all equipment (fixed and portable gas detectors) based on manufacturers requirements. Calibration records were observed.

Warning signs have been placed where cyanide is used advising workers that cyanide is present and that smoking, open flames and eating and drink are not allowed. The signage also stipulates the PPE that must be worn when working in the area. Signage was observed to be located at entrances to the plant areas and on fencing to storage areas. Signage was clear and legible and in the language of the workers.

Showers, low-pressure eyewash stations and dry-powder fire extinguishers are strategically located throughout the operation in the cyanide areas. Both the shower and eyewash stations and fire extinguishers are included in the relevant area inspection checklists.

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

Safety Data Sheets are translated in Bahasa Indonesia and kept at the location where cyanide is managed. Copies of the SDS were observed at the cyanide storage warehouse and cyanide mixing area.

Procedures are in place, to investigate and evaluate cyanide exposure incidents to determine if the operations programmes and procedures to protect worker health and safety, and to respond to cyanide exposures, are adequate or need revising.

There were three incidents related to cyanide releases occurred on site. The investigations were completed, and reports issued. The incidents did not result in hospitalisation, fatality or significant adverse effects to health or the environment. The scale of impacts were localised (minor internal incident classification) and were not reported publicly.

Standard of Practice 6.3: **Develop and implement emergency response plans and procedures to respond to worker exposure to cyanide.**

☒ **in full compliance with**

The operation is ☐ in substantial compliance with **Standard of Practice 6.3**

☐ not in compliance with

Summarise the basis for this Finding/Deficiencies Identified:

SPP is in FULL COMPLIANCE with Standard of Practice 6.3, requiring that operation develops and implements emergency response plans and procedures to respond to worker exposure to cyanide.

The operation has necessary response and communication equipment readily available for use at cyanide unloading, storage and mixing locations including radio and emergency oxygen supply.

In the event of an emergency, personnel are instructed to raise the alarm via the emergency radio channel or the emergency phone number. These contact points are manned 24 hours a day by the Emergency Call Centre. Technical and manual alarms are installed to inform the employees.

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SPP provides equipment for emergency response situation. The equipment is stored in the Site Clinic and at the ERT Base Control room. The operation does inspect its first aid equipment regularly to ensure that it is available when needed. Cyanide antidotes are stored as directed by their manufacturer and replaced on a schedule to ensure that they will be effective when needed. SPP conducts inspections against the emergency equipment. The inspection forms were observed.

HCN antidotes are well kept in cool temperature. Their expiry is tracked along with other medical supplies stored on site. The antidote was in date. Oxygen is checked daily. The operation has developed specific written emergency response plans or procedures to respond to cyanide exposures.

SPP established an emergency response plan (ERP) which is regularly updated following employees' comments and discussion post simulation or mock drill. The ERP document was revised following socialisation and discussion following an incident.

The operation does have its own on-site capability to provide first aid or medical assistance to workers exposed to cyanide.

The emergency response team are the primary responders to an emergency, however all processing personnel are instructed in the actions to take in the event of a cyanide exposure. The Paramedic will always accompany the ERT to an emergency with casualties. The ERT also has the capability to provide basic cyanide first aid including decontamination and the administering of oxygen.

SPP has a fully stocked medical clinic with oxygen, cyanide antidote kit and an ambulance. The clinic is staffed 24 hours/day with professional doctor, paramedic staff and a pharmacist. The operation has on-site capabilities to treat all cyanide exposures. As such, patients are unlikely to require transfer off site to other medical facilities. However, if this is required, the patient would be transferred by helicopter or speedboat to one of the regional hospitals for treatment.

SPP has developed procedures, and has agreements, to transport workers exposed to cyanide to locally available qualified off-site medical facilities where required.

Transport procedure in emergency is determined in the ERP. SPP engages with Prodia who will provide medical evacuation by air.

SPP also has a speed boat to evacuate casualties in emergency to regional hospitals i.e. RSUD Tarakan or Nunukan to get further medical treatment if needed.

SPP has established a contract agreement with local hospital at Nunukan for employee medicals referral.

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

SPP has conducted cyanide emergency drills as part of its emergency response plan evaluation including spill response, worker rescue and fire. The emergency drills are conducted at varying scales and debrief reports are compiled following each exercise. Three mock drills were conducted in 2017.

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PRINCIPLE 7 – EMERGENCY RESPONSE

Protect Communities and the Environment through the Development of Emergency Response Strategies and Capabilities

Standard of Practice 7.1: **Prepare detailed emergency response plans for potential cyanide releases.**

☒ **in full compliance with**

The operation is ☐ in substantial compliance with **Standard of Practice 7.1**

☐ not in compliance with

Summarise the basis for this Finding/Deficiencies Identified:

SPP is in FULL COMPLIANCE with Standard of Practice 7.1 requiring an operation to prepare detailed emergency response plans for potential cyanide releases..

The operation has developed an Emergency Response Plan (ERP) that addresses potential accidental releases of cyanide.

The ERP is the primary reference for responding to cyanide emergencies. SPP ERP considers the potential cyanide failure scenarios appropriate for its site-specific environmental and operating circumstances, including cyanide container toppled while unloading at staging area; Road transport incident from staging to warehouse and failure of standard operating conditions.

Releases during unloading and mixing and Releases during fires and explosions have also been further addressed through mock drills.

The ERP considers both on-site transportation emergencies and the physical form of cyanide (solid sodium cyanide). The cyanide is transported using container via sea freight and is unloaded in the staging area (jetty) close to the Site.

The ERP details the possible emergency situation related to transport activities The ERP describes specific response actions appropriate to the emergency situations such as clearing site personnel and potentially affected communities from the area of exposure, use of cyanide antidotes and first aid measures as well as supply clean water to communities if cyanide spills are suspected contaminated the surface water.

The ERP outlines how the alarm for a cyanide emergency is raised internally. The ERP also details the process to activate ERT and how to conduct medical evacuation of site personnel off the site. The evacuation process is developed using available medical transports (boat, chopper) due to SPP is located in relatively remote area. Consultation has included RSUD Tarakan (local hospital) so that staff are aware of their requirements in cyanide emergencies if a patient is evacuated to RSUD for further treatment.

The ERP provides first aid response to cyanide poisoning using the antidotes. Doctor and paramedics know how and when the antidote is administered. They are also involved in the emergency drills.

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

☒ **in full compliance with**

The operation is ☐ in substantial compliance with **Standard of Practice 7.2**

☐ not in compliance with

Summarise the basis for this Finding/Deficiencies Identified:

SPP is in FULL COMPLIANCE with Standard of Practice 7.2 requiring an operation to involve site personnel and stakeholders in the planning process..

SPP has involved its workforce and stakeholders, including potentially affect communities, in the cyanide emergency response planning process. Mechanisms to consult with the workforce who are the main stakeholders for cyanide related emergencies include toolbox meetings, learning and corrective actions process.

Given that the operation is remote from communities, accordingly specific response actions for communities from emergency event on site are not anticipated. Awareness for the potentially affected communities (i.e. local workers) are delivered through information and communication programs which from part of the workforce training.

SPP engages in consultation or communication with stakeholders to keep the Emergency Response Plan current. Consultation has included RSUD Tarakan (local hospital) so that staff are aware of their requirements in cyanide emergencies if a patient is evacuated to RSUD further treatment.

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

☒ **in full compliance with**

The operation is ☐ in substantial compliance with **Standard of Practice 7.3**

☐ not in compliance with

Summarise the basis for this Finding/Deficiencies Identified:

SPP is in FULL COMPLIANCE with Standard of Practice 7.3 requiring an operation to designate appropriate personnel and commit necessary equipment and resources for emergency response.

The elements of the ERP and procedures include:

- General Manager (GM) as the EMT Leader and the EHS Manager as the Emergency Commander. A safety superintendent is appointed as ERT Captain who has the responsibility to lead and activate the ERT. In his absence, a deputy (Safety Superintendent or Supervisors) is appointed as an alternate.
- EMT Leader, EMT Coordinator, EMT member, ERT Captain and his deputy. Each member has responsibility to support and participate in an emergency
- Training requirements for emergency responders.
- Call-out procedures and 24-hour contact information for the coordinators and response team members.
- Duties and responsibilities of the coordinators and team members.

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- List emergency response equipment, including personal protection gear, available along transportation routes and/or on site.
- Procedures to inspect emergency response equipment to ensure its availability.
- The external responder which are Prodia that will provide medical evacuation by air and RSUD Tarakan for further medical treatment.

The external responder detailed within the plan are Prodia that will provide medical evacuation by air and RSUD Tarakan for further medical treatment. Due to the remote location, no other response actions by external parties are envisaged. SPP established a contract agreement with the RSUD Tarakan and Prodia to confirm the services required if needed.

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

☒ **in full compliance with**

The operation is ☐ in substantial compliance with **Standard of Practice 7.4**

☐ not in compliance with

Summarise the basis for this Finding/Deficiencies Identified:

SPP is in FULL COMPLIANCE with Standard of Practice 7.4 requiring an operation develop procedures for internal and external emergency notification and reporting.

SPP emergency documentation includes procedures and contact information for notifying management, regulatory agencies, outside response providers and medical facilities of the cyanide emergency.

In the event of an emergency, personnel are instructed to raise the alarm via the emergency radio channel or the emergency phone number. These contact points are manned 24 hours a day by the Emergency Call Centre (ECC). The ECC will forward the information to ERT Captain who will activate ERT and coordinate with the EMT Commander. The EMT Commander will then inform the GM (EMT Leader). A decision will be made on whether the EMT requires activation. EMT Leader will also decide on external communication and whether to activate a Crisis Management Team (CMT). Based on direction from CMT, EMT Leader will communicate to Government, Stakeholder and Media.

SPP has mechanisms in place for external communication. Based on direction from CMT, EMT Leader will communicate to Government, Stakeholder and Media.

Standard of Practice 7.5: **Incorporate in response plans and remediation measures monitoring elements that account for the additional hazards of using cyanide treatment chemicals.**

☒ **in full compliance with**

The operation is ☐ in substantial compliance with **Standard of Practice 7.5**

☐ not in compliance with

Summarise the basis for this Finding/Deficiencies Identified:

SPP is in FULL COMPLIANCE with Standard of Practice 7.5 requiring an operation to incorporate in response plans and remediation measures monitoring elements that account for the additional hazards of using cyanide treatment chemicals.

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The emergency response documentation describes specific remediation measures for:

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

The ERP prohibits the use of chemicals to treat cyanide that has been released into surface water. The ERP states:

> *Do not attempt to treat NaCN spills to fresh water sources such as rivers or streams.*

The ERP allows the use of sodium hypochlorite to neutralise spills to soil. However, it prohibits the use of this chemical or other neutralising agents in surface drainage areas.

The ERP addresses the potential need for environmental monitoring to identify the extent and effects of a cyanide release. Duty Card #6 of Cyanide Coordinator includes the responsibility to assess the cyanide impact to environment and human lives. Also, in each of cyanide emergency situation, ERT to monitor the cyanide level in surface water, groundwater, soils and the hydrogen cyanide concentration in the air.

The environmental monitoring procedures provide methodologies and sample preparation, preservation and shipment information for:

- Water sampling
- Plankton and biota.

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

☒ **in full compliance with**

The operation is ☐ in substantial compliance with **Standard of Practice 7.6**

☐ not in compliance with

Summarise the basis for this Finding/Deficiencies Identified:

SPP is in FULL COMPLIANCE with Standard of Practice 7.6 requiring an operationto periodically evaluate response procedures and capabilities and revise them as needed .

SPP reviews and evaluates the cyanide related elements of its emergency response plan for adequacy on a regular basis.

The ERP has been updated on a number of occasions and most recently updated in November 2016. In addition to the schedule periodic review process, SPP also uses desktop exercises and emergency drills as part of the consultation process to keep the plan current. Those involved in the exercises and debriefs provide feedback post drills.

SPP conducted a number of cyanide emergency drills as part of its emergency response plan evaluation since 2014 including spill response, worker rescue and fire. The emergency drills are conducted at varying scales and debrief reports are compiled following each exercise.

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There were three incidents related to cyanide releases occurred on site in 2015 and 2016 (Minor Internal Incident). The investigations were completed and reports issued but no public report required. The incidents and lesson learns were shared to employees and the events were used as scenarios for emergency drills.

Feedback and lesson learnt are discussed post emergency drills and shared to employees.

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PRINCIPLE 8 – TRAINING

Train Workers and Emergency Response Personnel to Manage Cyanide in a Safe and Environmentally Protective Manner

Standard of Practice 8.1: **Train workers to understand the hazards associated with cyanide use.**

☒ **in full compliance with**

The operation is ☐ in substantial compliance with **Standard of Practice 8.1**

☐ not in compliance with

Summarise the basis for this Finding/Deficiencies Identified:

SPP is in FULL COMPLIANCE with Standard of Practice 8.1 requiring an operation to train workers to understand the hazards associated with cyanide use .

SPP trains all personnel who may encounter cyanide in Cyanide Introduction and Awareness Training. Cyanide awareness is covered in the Induction for visitors as part of the Site operation information. Further detail is included in the Basic OHS Induction (Training Code A6) which all personnel need to complete.

In addition to the Induction Material, the operation provides cyanide awareness training for personnel that work in the processing area. Cyanide management is also included in the related procedures, work instructions and job safety analysis (JSA). These documents are also used as training materials for the relevant personnel.

Cyanide hazard recognition and awareness refresher training is conducted every two year. The operation has an electronic database for managing training and a review of training records for processing and maintenance personnel indicates training is completed in accordance with the schedule.

Training records have been retained. A review of training records for personnel across processing and maintenance revealed that records are maintained.

Standard of Practice 8.2: **Train appropriate personnel to operate the facility according to systems and procedures that protect human health, the community and the environment.**

☒ **in full compliance with**

The operation is ☐ in substantial compliance with **Standard of Practice 8.2**

☐ not in compliance with

Summarise the basis for this Finding/Deficiencies Identified:

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

New starters complete a general induction that provides information on safety and the environment including hazard and risk assessment tools (J-SAFE Introduction). Personnel who work in the processing plant undertake an area specific induction that includes cyanide awareness. The inductions provide information on the hazards and controls in place at the operation.

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Once process workers have completed the inductions they are teamed with an experience operator and provided on the job training. Supervisors in the processing plant are experienced. Workers are trained and assessed on standard operating procedure (SOP), task procedures, job safety analysis (JSA) and work instructions (WI) including unloading, mixing and production tasks.

The JSAs contain step by step instructions on how to perform each task, as well as pertinent health, safety and environment information. The JSA is used as a training material for the operators.

All personnel undergo Cyanide Introduction and Awareness training prior to the commencement of work. They are required to undergo refresher training every two years.

SPP evaluates the effectiveness of cyanide training. The trainer conducts testing to assess the employees' level of knowledge with regards to cyanide awareness training. The evaluation undertaken depends on their position. In addition to training evaluation, SPP also conducts behaviour intervention observation and toolbox discussions which include cyanide related tasks.

Records retained throughout an individual's employment documenting the training they receive. The records include the names of the employee and the trainer, the date of training and the topics covered. A random sample of training files and review of paper files confirmed that records are retained.

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

☒ **in full compliance with**

The operation is ☐ in substantial compliance with **Standard of Practice 8.3**

☐ not in compliance with

Summarise the basis for this Finding/Deficiencies Identified:

SPP is in FULL COMPLIANCE with Standard of Practice 8.3 requiring an operation develop and implement emergency response plans and procedures to respond to worker exposure to cyanide.

The operation has developed JSAs and task procedures for response to cyanide spills during unloading, mixing and production. SPP has also developed an Emergency Response Plan (ERP) which includes cyanide emergency response plan (CERP). All personnel working in the processing area attend the cyanide introduction and awareness training which includes information on what to do if cyanide is released.

All personnel receive instruction and training on emergency response and raising the alarm. The primary response actions for processing and maintenance personnel are to raise the alarm and evacuate the area.

The ERT is the core team for emergency response. SPP ERT has been trained by National Rescue Board (Basarnas). Emergency drills are conducted regularly.

SPP is located in a remote area of North Kalimantan and accordingly there are no outside responders (e.g. fire brigades) that would be involved in a response. SPP has established a contract with the RSUD Tarakan in relation to patient transfer should a cyanide exposure occur, and also engages Prodia to provide medical evacuation by air.

Simulated cyanide emergency drills are periodically conducted for training purposes. 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.

Cyanide emergency drills are evaluated. Learnings and corrective actions are undertaken and shared to employees.

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PRINCIPLE 9 – DIALOGUE

Engage in Public Consultation and Disclosure

Standard of Practice 9.1: **Provide stakeholders the opportunity to communicate issues of concern.**

☒ **in full compliance with**

The operation is ☐ in substantial compliance with **Standard of Practice 9.1**

☐ not in compliance with

Summarise the basis for this Finding/Deficiencies Identified:

SPP is in FULL COMPLIANCE with Standard of Practice 9.1 requiring an operation to provide opportunity for stakeholders to communicate issues of concern regarding the management of cyanide.

SPP conducts socialisation and provide tours for communities to get understanding of cyanide management. A bulletin "Sinergo" containing cyanide management information is distributed to local government and stakeholders.

Employee induction also provides information about cyanide management for employees including locals coming from nearby villages.

Morning toolbox meetings are held at SPP in which site personnel can raise issues regarding cyanide.

Standard of Practice 9.2: **Initiate dialogue describing cyanide management procedures and responsively address identified concerns.**

☒ **in full compliance with**

The operation is ☐ in substantial compliance with **Standard of Practice 9.2**

☐ not in compliance with

Summarise the basis for this Finding/Deficiencies Identified:

SPP is in FULL COMPLIANCE with Standard of Practice 9.2 requiring an operation to initiate dialogue describing cyanide management procedures and responsively addressing identified concerns.

SPP has created multiple opportunities for the operation to interact with stakeholders and provide them with information regarding cyanide management practices and procedures. This includes internal training and socialisation, external bulletins and socialisation; and company webpage.

The operational also conducts tours of the mine and processing facilities providing a verbal and visual forum for the discussion of mining processes, controls and activities including the management of cyanide. EHS and related department (such as Process Plant) at the mine provide information to the visitors.

Standard of Practice 9.3: **Make appropriate operational and environmental information regarding cyanide available to stakeholders.**

☒ **in full compliance with**

The operation is ☐ in substantial compliance with **Standard of Practice 9.3**

☐ not in compliance with

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Summarise the basis for this Finding/Deficiencies Identified:

SPP is in FULL COMPLIANCE with Standard of Practice 9.3 requiring an operation make appropriate operational and environmental information regarding cyanide to stakeholders.

SPP has developed written descriptions of how their activities are conducted and how cyanide is managed. Based on the isolated nature of SPP, and discussions with EHS and External Relation team, it was considered that the illiterate proportion of the local population did not constitute a significant percentage. Consequently, verbal dissemination of material was not considered warranted. However, SPP presents to local communities, and also provides mine tours from time to time providing a verbal forum for the dissemination of information on cyanide management.

SPP has the mechanisms to make information publicly available on the cyanide release or exposure incidents, where applicable.

SPP applies an Incident Reporting and Investigation Procedure. There were three incidents related to cyanide releases occurred on site. The investigations were completed, and reports issued. Learnings taken from the incidents were also shared to employees via toolbox meeting.

The incidents did not result in hospitalisation, fatality or significant adverse effects to health or the environment. These incidents were not reported publicly as they could be managed, and the scale of impacts were localised.

However, the incidents and lesson learnt were shared to employees (which also include locals) and the events were used as scenarios for emergency drills.

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Report Signature Page

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APPENDIX A

Important Information

IMPORTANT INFORMATION RELATING TO THIS REPORT

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