INTERNATIONAL CYANIDE MANAGEMENT CODE
GOLD MINING OPERATIONS

SUMMARY AUDIT REPORT
SUNRISE DAM GOLD MINE

PREPARED FOR:
ANGLOGOLD ASHANTI AUSTRALIA LTD

December 10

INDEPENDENT
METALLURGICAL
OPERATIONS
PTY LTD

SUMMARY AUDIT REPORT
Auditor's Findings

Mine:	Sunrise Dam Gold Mine (SDGM)
Mine Owner:	AngloGold Ashanti Australia Ltd
Mine Operator:	AngloGold Ashanti Australia Ltd
Responsible Manager:	Mr. Mike LeRoy, VP Sustainability
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Location and Description of Operation:

The Sunrise Dam Gold Mine is located within the Northern Gold Fields region of Western Australia, some 220 km north-northeast of Kalgoorlie and 55 km south of the township of Laverton. The mine is situated immediately to the east of the hypersaline Lake Carey and is surrounded by numerous other small saline lakes. The operation has processed some 39 million tonnes of ore to produce 4.73 million ounces of gold since the commencement of operation in 1997. The process plant capacity is some 3.9 million tpa, subject to the characteristics of the ore feed.

Ore, which is sourced from open pit and underground mine, is trucked to a run of mine (Rom) pad, prior to being blended and fed to the process plant. Milled ore is treated using a Carbon in Leach (CIL) process that involves the use of sodium cyanide to leach gold from the ore into solution, which is then recovered using carbon adsorption methods. The barren "tailings" slurry from the CIL is pumped to a tails thickener.

The tails thickener underflow is pumped to a Central Thickened Discharge (CTD) storage facility at a density of 68% solids, with overflow water returning to the process. The concept of stacked tailings, or "central thickened discharge" system was developed in Canada during the 1970's. There are currently six CTD tailings storage facilities operating in Australia. The CTD can be classified as a low hazard facility in accordance with the Western Australian Department of Minerals and Energy "Guidelines on the Safe Design and Operating Standards for Tailings Storages". The process plant's sodium cyanide consumption ranges from 0.39 to 0.45 kg/tonne ore milled which equates to an annual consumption of some 1,620 tonnes (based upon the 2009 mill throughput). The operation uses 30% w/v liquid cyanide which is transported by rail from the suppliers production facility (located at Kwinana some 40 km

south of Perth within the state of Western Australia), to a transshipping facility at Kalgoorlie, where it is then transported by road to the SDGM site. Solid cyanide is not transported to, stored, mixed or used at the operation.

This operation is

☐ in full compliance
☑ **in substantial compliance**
☐ not in compliance

with the International Cyanide Management Code*

***** A copy of the Corrective Action Plan to bring the operation into full compliance is included with this Summary Audit Report. The plan must be fully implemented within one year of the date of this audit.

Audit Company:	Independent Metallurgical Operations Pty. Ltd. (IMO) 88 Thomas Street West Perth WA 6005 Tel: +61 8 9254 6900 Fax: +61 8 9322 1808
Date(s) of Audit:	Inclusive of the period February 22 to February 26, 2010
Audit Team Leader:	John Miragliotta (john.miragliotta@sustainability.net.au)

Names and Signatures of Other Auditors:

Name of Auditor	Signature	Date
Raymond L. Biehl		7 December 2010
R. John McKenna		7 December 2010

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

I attest that this Summary Audit Report accurately describes the findings of the verification audit. I further attest that the verification audit was conducted in a professional manner in accordance with the International Cyanide Management Code Verification Protocol for Gold

AngloGold Ashanti
Sunrise Dam Gold Mine

7 December 2010

Signature of Lead Auditor

Mining Operations (October 2009) and using standard and accepted practices for health, safety and environmental audits.

AngloGold Ashanti Sunrise Dam Gold Mine		7 December 2010
Facility:	Signature of Lead Auditor	Date:

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

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

The operation is:

- ☑ **in full compliance**
- ☐ in substantial compliance
- ☐ not in compliance

with Standard of Practice 1.1

Basis for this Finding/Deficiencies Identified:

The SDGM contract with the cyanide manufacturer, Australian Gold Reagents Pty Ltd (AGR), includes the requirement for the production facility to be certified as being in compliance with the Code. All cyanide purchased by SDGM since the June 2006 Certification Audit was supplied in liquid form and was manufactured at AGR's Kwinana production facility. This cyanide production facility was certified as fully compliant with the Code on 9 October 2007.

2. TRANSPORT: 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.

AngloGold Ashanti Sunrise Dam Gold Mine		7 December 2010
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The operation is:

- ☑ **in full compliance**
- ☐ in substantial compliance
- ☐ not in compliance

with Standard of Practice 2.1

Basis for this Finding/Deficiencies Identified:

SDGM has contracted AGR to supply liquid sodium cyanide to the operation and requires this supply to be facilitated through transport operations which are fully compliant with the ICMI Code of Practice. AGR is a certified transport operator under the Code. AGR was initially certified as a fully compliant cyanide transporter on 26 September 2006. AGR was re-certified as a fully compliant cyanide consignor in April 2010. AGR's certified cyanide supply chain was the only operation used to transport liquid sodium cyanide to SDGM over the period of certification.

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

The operation is:

- ☑ **in full compliance**
- ☐ in substantial compliance
- ☐ not in compliance

with Standard of Practice 2.2

Basis for this Finding/Deficiencies Identified:

The operation's only manufacturer/supplier/transporter of liquid sodium cyanide, AGR, is a signatory to the Code and was initially certified as a fully compliant cyanide transporter in September 2006. AGR was re-certified as a fully compliant cyanide consignor in April 2010. AGR's compliance with the Code includes verification of the adequacy of emergency response roles, capabilities and responsibilities which apply to all aspects of transport from AGR's manufacturing facility to the SDGM operation.

3. HANDLING AND STORAGE: Protect workers and the environment during cyanide handling and storage.

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

The operation is:

- ☑ **in full compliance**
- ☐ in substantial compliance
- ☐ not in compliance

with Standard of Practice 3.1

Basis for this Finding/Deficiencies Identified:

There has been no change to the originally certified unloading, storage and mixing facility design at SDGM since 2006. The operation has maintained records of design compliance with relevant construction standard and statutory approval requirements. The operation has continued annual third party inspections of unloading, transfer and storage facilities to ensure that the condition and design of facilities is maintained within accepted specifications and statutory requirements. The condition of concrete secondary containment storage and unloading areas has been subject to specialist corrosion audits and ongoing internal inspection to ensure design standards are maintained. Storage and transfer tank level alarm and indicator systems are subjected to scheduled maintenance programs to ensure functionality is continued as per the original design specifications.

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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.*

The operation is:

- ☑ **in full compliance**
- ☐ in substantial compliance
- ☐ not in compliance

with Standard of Practice 3.2

Basis for this Finding/Deficiencies Identified:

The operation has continued to maintain, review and implement liquid cyanide unloading procedures which include identification of the required PPE requirements, spill response contingencies, specific procedural checklists, and a permit to work for each delivery. Copies of completed unloading pre-start hazard checklists and permits to work were sighted during the audit. The work permits for each delivery include the requirement for an observer to be present during unloading activities.

The operation's preventative maintenance program continues to include the liquid cyanide storage facility and a range of scheduled workplace inspections are undertaken by the responsible SDGM process plant and management personnel. The maintenance and inspection programs were found to be effective in ensuring protection of worker safety and prevention of potential harmful release of cyanide.

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, practices and procedures designed to protect human health and the environment including contingency planning and inspection and preventive maintenance procedures.*

The operation is:

- ☑ **in full compliance**
- ☐ in substantial compliance
- ☐ not in compliance

with Standard of Practice 4.1

Basis for this Finding/Deficiencies Identified:
The operation has continued to implement a comprehensive range of standard operating procedures including unloading, confined space entry, permits to work, preventative maintenance, first aid, spillage, inspections and HCN gas monitoring. These procedures are regularly reviewed and amended as necessary to ensure effectiveness. Cyanide operational and monitoring procedures are included within an Integrated Management System compliant with ISO14001 and OHSASA 18001.

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The operation undertakes a range of scheduled inspections for the processing plant and related cyanide facilities. Deficiencies observed during the inspections are either rectified immediately, a work order placed within the preventative maintenance system or reported through the site SHE incident/hazard reporting database. The audit found the scheduled inspection program to be effective in ensuring protection of human health and the environment.

The operation has continued to implement and review a "management of change" procedure. The management of change checklist considers potential changes or requirements relating to the required parts, standard operating procedures, permits, maintenance procedures, training, drawing updates, etc and the accompanying risk assessment considered potential release and safety scenarios.

The operation has continued to operate a comprehensive maintenance and action planning system to track preventative maintenance aspects for the process plant including periodic inspections. The preventative maintenance program schedule includes a comprehensive range of cyanide related facility inspections, including tanks, pipes, pumps, sensors, etc. A range of workplace inspections are undertaken by the responsible SDGM process plant and management personnel.

The operation's CTD tailings storage facility manual includes specific details of the contingency procedures in the event of an upset in the water balance, when inspections and monitoring identify a deviation from design or standard operating procedures, or when a temporary closure or cessation of operations may be necessary.

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

The operation is:

- ☑ **in full compliance**
- ☐ in substantial compliance
- ☐ not in compliance

with Standard of Practice 4.2

Basis for this Finding/Deficiencies Identified:
The operation has continued to use daily bottles roll tests to establish the cyanide addition set points. pH buffer testwork is undertaken periodically to establish optimal lime (and hence gold

recovery and cyanide) consumption due to the hyper-saline process water, which varies considerably during the wet and dry season (i.e. higher salinity during summer).

The operation has also continued to assess metallurgical recovery issues for the planned mine resource to assess optimum cyanide addition rates for the different ore types. The defined ore types are consistent whether sourced from open pit or from underground.

SDGM has installed an automatic cyanide analyzer since the initial certification audit for controlling cyanide additions in the circuit in response to variations in processing conditions. The control system was inspected by the audit team and records indicate that cyanide addition rates have been substantially optimized since the previous audit.

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

The operation is:

- ☑ **in full compliance**
- ☐ in substantial compliance
- ☐ not in compliance

with Standard of Practice 4.3

Basis for this Finding/Deficiencies Identified:

The operation has implemented a comprehensive water management program through operational manuals and standard operating procedures. Water management measures are reviewed periodically on the basis of the probabilistic site water model. A revised water balance has been developed with reference to the requirements of the Code and includes probabilistic analysis of rainfall events for consideration of stormwater management and design and management of the tailings facility. The water balance has been updated to reflect the most recent site specific data for the revision of water management models at SDGM.

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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.*

The operation is:

- ☐ in full compliance
- ☑ **in substantial compliance -**
- ☐ not in compliance

with Standard of Practice 4.4

Basis for this Finding/Deficiencies Identified:

SDGM had previously completed an alternative protection strategy for birds/wildlife on the tailings facility as WAD CN concentrations of water on the dam exceeded the 50 mg/L ICMI recommended protection limit. A peer reviewed technical study (Causational Report) to support the alternative bird/wildlife protection strategy, was deemed to fully comply with the Code during the initial compliance audit. SDGM implemented management measures through its Cyanide Management Plan and tailings management manual in accordance with the 20 recommendations of the Causational Report.

The audit reviewed compliance with the recommendations of the original Causational Report and found that the operations encountered periods when WAD CN concentrations on the CTD tailings facility had deviated from the operational parameters as prescribed in recommendations.

The cause of the deviations from the prescribed operational parameters was primarily identified as resulting from increasing WADCN forming characteristics in the ore blends encountered at SDGM. In November 2009 SDGM commenced studies to investigate a recalibration of its tailings WADCN discharge operational parameters.

The audit found that SDGM's responses to the deviation in operating parameters for the tailings discharge WADCN concentrations represent a "good faith" effort by SDGM to return the operational parameters to compliance with the recommended criteria. The audit also found that SDGM's actions to ensure continuous improvement of wildlife monitoring of the CTD and efforts to recalibrate the operational parameters to better reflect actual WADCN characteristics and discharge profiles, represent good faith efforts to ensure the intent of the Code is complied with through protection of wildlife.

SDGM's efforts and responses to individual events of deviation from recommended operational parameters were not fully and consistently effective in preventing recurrence of the exceeding

tailings WADCN concentration events. Therefore, the audit has recommended a finding of substantial compliance with this Code requirement.

An SDGM initiated review of these high WADCN concentration events identified that despite the increases in cyanide discharge concentrations the tailings systems continued to be benign to wildlife. All other recommendations of the Causational Report were found to be implemented by SDGM through its management plans and procedures.

SDGM initiated a study review in November 2009 to revisit the recommendations of the original peer reviewed technical study for the alternative bird/wildlife protection measures in relation to the cyanide concentration trigger levels. The revised study was subject to peer review and submitted for completeness review by the ICMI in accordance with the ICMI October 2009 Revised Auditor Guidance. SDGM has revised its Cyanide Management Plan to include the revised recommendations in the re-calibration report relating to cyanide concentration trigger levels and management actions that shall apply. The audit found that the revised Cyanide Management Plan is compliant with the recommendations of the re-calibration report.

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

The operation is:

- ☑ **in full compliance**
- ☐ in substantial compliance
- ☐ not in compliance

with Standard of Practice 4.5

Basis for this Finding/Deficiencies Identified:
The operation has continued to have no direct or indirect discharges to surface water other than contingency discharge of excess mine pit water to a nearby ephemeral saline lake system. The mine pit water has had no contact with cyanide or processing areas and monitoring results indicate no cyanide present in the pit water. Surface water on the adjacent lake system only occurs following extreme storm events. The last surface water on Lake Carey occurred in 2004. The CTD tailings facility and decant/stormwater water pond includes an approved emergency spillway for the controlled discharge of any water, in excess of the design storm event. The emergency spillway has not required to be operated since the CTD facility commenced operation in 1999.

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

The operation is:

- ☑ **in full compliance**
- ☐ in substantial compliance
- ☐ not in compliance

with Standard of Practice 4.6

Basis for this Finding/Deficiencies Identified:
Formal hydrogeologic studies have been completed as part of the operation's statutory obligations and are reviewed annually as part of the licence conditions for the tailings storage facilities. The CTD tailings storage facility includes a seepage interception trench part way round the facility, together with recovery bores. These measures are directed toward mitigating the ground water levels outside the facility (from a hypersalinity vegetation impact perspective) and are not associated with any cyanide or beneficial use impacts.

SDGM applies an internal limit of 0.5 mg/l WAD CN for the protection of beneficial users of groundwater in accordance with appropriate water quality guidelines. The tailings facility perimeter groundwater monitoring bores are within the criteria for WADCN established by the SDGM. The nearest beneficial users of groundwater, livestock watering wells, are located greater than 15km from the operations. New monitoring bores have been installed at the process plant since the initial certification audit. These bores indicate that groundwater quality has not exceeded the 0.5 mg/l WAD CN internal limit established for the operation.

A tailings backfill plant was under construction at the time of the audit. SDGM has completed a change management process to identify specific risks to worker health and the environment. Tailings proposed to be used for backfill and water quality to be used for the plant have been evaluated and the risk to worker health and the environment is expected to be low. Monitoring programs are proposed to be established for HCN in underground workings, underground water quality and backfill material residual cyanide.

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

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The operation is:

☑ **in full compliance**
☐ in substantial compliance
☐ not in compliance

with Standard of Practice 4.7

Basis for this Finding/Deficiencies Identified:
SDGM has continued to provide adequate spill prevention and containment measures for the process plant tanks and pipelines, including the tailings pipeline. Since the June 2006 audit there have been 2 recorded incidents where cyanide slurry has escaped from the tailings line (1 June 2007 and 9 March 2008). Both incidents were reported to the Department of Environment and Conservation (DEC) and in both cases the cyanide slurry was contained within the earthen containment structure. Any spills from the cyanide solution pipelines crossing between the goldroom and the CIL area are now contained by the installation of a "pipe within a pipe" protection system.

During the June 2006 audit it was determined that any cyanide solution spills from these pipelines would report to the unlined stormwater pond located adjacent to the crushing facility. SDGM prohibits the use of this pond for other than emergency containment and utilizes clean up procedures for rapid response and remediation in the event that a release occurs and is contained within the pond. No such releases have occurred since the June 2006 audit.

Damage to the concrete secondary containment walls surrounding the cyanide facilities caused by the hypersaline process water has continued, resulting in SDGM undertaking a concrete assessment and remediation work since 2008. At the time of the audit the remediation works had been completed in the cyanide unloading and storage area and had commenced in the leach/ adsorption area. Despite the condition of the concrete the containment measures were still assessed by the auditors as adequate to contain any spills of cyanide slurries or solutions.

Since the 2006 certification audit SDGM has increased the capacity of the unlined stormwater pond located adjacent to the crushing area to provide a volume in excess of the capacity of the tailings thickener and allowing for a one in one hundred year storm event. No recorded spillages of cyanide slurries or solutions from the CIL/tails thickener area have occurred since the 2006 audit and the capacity of the unlined stormwater pond has been retained.

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The CIL tanks sit on ring beams with no impermeable barrier between them and the ground. To fully comply with the Code, SDGM has installed 4 new monitoring bores in the vicinity of these tanks to complement the annual tank inspection program. These bores are monitored for water quality on a quarterly basis and to date there has been no indication of contamination of groundwater from cyanide facilities.

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

The operation is:

- ☑ **in full compliance**
- ☐ in substantial compliance
- ☐ not in compliance

with Standard of Practice 4.8

Basis for this Finding/Deficiencies Identified:
No new cyanide facilities or modifications to existing cyanide facilities have been undertaken since the June 2006 audit. All quality control and quality assurance construction records examined in the June 2006 audit have been retained in files located in the Senior Metallurgist's office. SDGM had commenced trials for a tailings paste backfill plant for underground mine activities. Temporary tailings paste backfill facilities were in the process of construction at the time of the audit. Temporary paste facilities are planned to be used until a permanent facility is constructed. The tailings paste plant facilities are being designed as cyanide handling facilities and ICMI Code requirements are included in the scope for design and operational aspects of the paste plant.

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

The operation is:

- ☑ **in full compliance**
- ☐ in substantial compliance
- ☐ not in compliance

with Standard of Practice 4.9

Basis for this Finding/Deficiencies Identified:
The operation continues to implement and review a range of monitoring procedures in relation to the sampling, handling and chain of custody for tailings slurry and water, for both operational control and environmental compliance purposes. The sampling requirements are specified in licence conditions in accordance with recognised Australian standard test methods. Testing is undertaken at laboratories accredited with the National Association of Testing Authorities (NATA) for both sampling and analyses. SDGM has incorporated effective quality control processes within its monitoring program to provide verification and reliance on monitoring results.

SDGM has continued to undertake 12 hourly inspections of the CTD tailings facility, which includes identification of any wildlife use and any observed mortalities. The wildlife observation monitoring also includes quality control processes and a comprehensive training component to ensure effectiveness of the program.

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

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

The operation is:

- ☑ **in full compliance**
- ☐ in substantial compliance
- ☐ not in compliance

with Standard of Practice 5.1

Basis for this Finding/Deficiencies Identified:

The operation has continued to developed and implement a closure plan which describes the obligations, closure risks, objectives, improvement plan, implementation plan, decontamination plan, closure criteria concept for the operation's cyanide related facilities (paddock tailings dam, CTD tailings dam processing plant (cyanide and other reagents). The plan includes a schedule of closure activities. The operation has commenced closure and decommissioning of the disused paddock tailings facility.

The operation has last reviewed it closure plan in 2009 and is scheduled to complete a review every 3 years.

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

The operation is:

- ☑ **in full compliance**
- ☐ in substantial compliance
- ☐ not in compliance

with Standard of Practice 5.2

Basis for this Finding/Deficiencies Identified:

The operation's closure plan includes details of the cost estimate methodology and the estimated cost to fully fund the third party implementation of the cyanide related decommissioning

activities. The financial mechanism, as required and approved by the Western Australian Department of Industry and Resources, comprises an unconditional performance bond for each tenement, guaranteed by a financial institution.

The unconditional performance bond is effectively a contract with the Minister for State Development, providing for the unconditional payment of an agreed sum following the failure of the tenement holder to meet the previously agreed environmental commitments. Reviewed copies of the tenement reports applicable to the Sunrise Dam Gold Mine operations include details of the approved unconditional performance bonds. SDGM's external and internal provisions for decommissioning are subject to independent periodic financial audits which have assessed the closure provisions as adequate to cover predicted closure costs.

6. WORKER SAFETY: Protect worker health and safety from exposure to cyanide.

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

The operation is:

- ☑ **in full compliance**
- ☐ in substantial compliance
- ☐ not in compliance

with Standard of Practice 6.1

Basis for this Finding/Deficiencies Identified:

The operation has continued to maintain a range of team based risk assessments which have been consolidated into a single risk register. The risk register was originally developed in 2006 and has been revised in 2009. A number of HAZOP's have also been completed for the cyanide facilities. The management of change records developed for the proposed paste backfill operation provides a record of changes to risk assessments resulting from changes in operations. The operation has developed and implemented a comprehensive range of standard operating procedures which describe how cyanide related tasks such as unloading, mixing, plant operations, isolation, confined space entry and maintenance should be conducted to minimise worker exposure. The operation's "management of change" procedure has a checklist which considers potential changes or requirements relating to the required parts, standard operating procedures, permits, maintenance procedures, training, drawing updates, etc and the accompanying risk assessment considered potential release and safety scenarios. SDGM's

processes include operator input to health and safety procedures via morning meetings, weekly shift safety meetings, monthly safety representative meetings and quarterly manager's meetings. Senior process plant personnel have signed off on cyanide related procedure review changes.

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

The operation is:

- ☑ **in full compliance**
- ☐ in substantial compliance
- ☐ not in compliance

with Standard of Practice 6.2

Basis for this Finding/Deficiencies Identified:

SDGM continues to periodically determine the appropriate pH for limiting the evolution of HCN gas. The results of pH buffering test work completed in 2002 and 2003 have not changed since the original certification audit. The results of the test work indicate the hyper-saline process makeup water (ranging from some 50,000 to 400,000mg/l TDS, average 200,000mg/l, with higher concentrations experienced during the dry season), limits the pH that is practicably achievable.

Daily Specific Gravity testing of the process water is undertaken to assist in determining the target pH and lime dosage rates. The operation employs control software for the process plant which includes provision for the lime addition set point control. An automatic pH meter is included in the control system; however scale issues associated with the hyper-saline process water means this meter is often unreliable. As such, 2 hourly hand meter checks are undertaken to confirm the process slurry pH (included in CIL standard operating procedures). All HCN monitoring equipment is calibrated.

The operation has identified the CIL tanks, trash screens and thickener areas where workers could be exposed to HCN gas in excess of this standard of practice item requirement. The HCN gas management strategy in these areas includes a combination of ambient monitors fitted with control room alarms, together with the requirement for all personnel entering these areas to carry a portable monitor and escape mask. Personnel are required to leave the area when a HCN gas reading of 5 ppm is observed by either the personnel or fixed monitor alarms.

Warning signs were observed across the operation during the audit, including the liquid cyanide storage and unloading facility, CIL tank area and the entrance gate to the CTD tailings storage facility. All cyanide containing pipelines are clearly marked as "cyanide" and indicate direction of flow. Low pressure eyewash showers and dry powder fire extinguishers are located strategically across the process plant, which are subject to a program of regular inspection and preventative maintenance.

MSDS, first aid procedures, cyanide awareness and induction materials provided to workers are written in English, which is the language used by all workers and contractors on site.

Environment or safety issues identified from incidents or inspections are evaluated, investigated, logged and tracked by SDGM using incident reporting and action tracking software tools.

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

The operation is:

- ☑ **in full compliance**
- ☐ in substantial compliance
- ☐ not in compliance

with Standard of Practice 6.3

Basis for this Finding/Deficiencies Identified:

The operation has continued to maintain and implement emergency management plans and first aid procedures to respond to worker exposure to cyanide. A dedicated cyanide antidote kit and oxygen resuscitation equipment is available. The operation maintains an onsite First Aid medical clinic which is staffed by a full time Registered Nurse (on 24 hour call). Senior process personnel are provided with competency based training in the use of the cyanide antidote kit (for initial immediate response). The cyanide response equipment and the first aid kit contents are inspected monthly. Antidote packages are reviewed and replaced annually, in accordance with manufacturer recommendation, under a Drug Replacement system with reorder dates specified. For Oxy-vivas, the operators are responsible for the units and the status is inspected monthly by the Clinic staff.

The operation's emergency response resources include a dedicated ambulance and the local hospital and medical providers have been notified and periodically participate in emergency mock drills. A combination of fixed line and mobile telephones and radios (base station and

portable hand held) are available on site. Emergency response capabilities are tested through periodic mock emergency drills with operations and emergency response personnel.

The SDGM procedures for responding to cyanide incidents include measures to protect health and safety of responders and communities. The cyanide emergency response procedures are reflected in the SDGM Emergency Management Plan and the SDGM Crisis Management Plan.

7. EMERGENCY RESPONSE: Protect communities and the environment through the development of emergency response strategies and capabilities.

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

The operation is:

- ☑ **in full compliance**
- ☐ in substantial compliance
- ☐ not in compliance

with Standard of Practice 7.1

Basis for this Finding/Deficiencies Identified:

The operation has continued to develop emergency response capability through its Emergency Management Plan (EMP) and Crisis Management Plan. These plans have been revised since the 2006 audit with the EMP now including 4 response levels, with the highest level 4 comprising the activation of the Crisis Management Committee (e.g. Category 1 cyanide incident).

A Cyanide Emergency Response Procedure has been produced for the SDGM Lease and surrounding areas/communities which consider eight potential cyanide threats with action flowcharts provided for each threat. These threats include:

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

- Failure of tailings impoundments, heap leach facilities and other cyanide facilities.

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

The operation is:

☑ **in full compliance**
☐ in substantial compliance
☐ not in compliance

with Standard of Practice 7.2

Basis for this Finding/Deficiencies Identified:

The operation's personnel have continued to be involved in the emergency planning process including participation in the formal annual Emergency Management Plan reviews and mock drill exercises. The operation engages external stakeholders in the planning process, primarily via the Local Emergency Management Advisory Committee (LEMAC), which includes the local shire council, police, hospital, ambulance, fire brigade and other mining operations.

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

The operation is:

☑ **in full compliance**
☐ in substantial compliance
☐ not in compliance

with Standard of Practice 7.3

Basis for this Finding/Deficiencies Identified:

The operation's Emergency Management Plan describes and identifies the roles, responsibilities and call out procedures, which are clearly shown within the emergency response control flow chart. The General Manager or designate has overall authority and responsibility and the incident controller assumes control of all mine site resources for the duration of any declared emergency.

The operation maintains a comprehensive range of emergency equipment and resources, details of which are provided in the Emergency Management Plan. The operation has established mutual aid agreements with nearby mining operations and the local council and has access to the

supplier/transporter emergency response capabilities for cyanide transport related incidents (which includes stocks of ferrous sulphate located strategically along the transport route).

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

The operation is:

- ☑ **in full compliance**
- ☐ in substantial compliance
- ☐ not in compliance

with Standard of Practice 7.4

Basis for this Finding/Deficiencies Identified:

The operation's Emergency Management Plan describes the requirement and procedures to notify external emergency support services which include notification of the surrounding communities. The Emergency Response Plan contains a list of the internal and external emergency contacts including details for offsite SDGM personnel, local and regional fire officers, police, hospitals, governmental agencies and departments and supplier/contractors. The operation produces a weekly emergency response roster/contact details sheet which identifies the key management and emergency response team members who are on site (updated weekly to reflect fly in/out roster operation).

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

The operation is:

- ☑ **in full compliance**
- ☐ in substantial compliance
- ☐ not in compliance

with Standard of Practice 7.5

Basis for this Finding/Deficiencies Identified:

The operation's Emergency Management Plan identifies and describes the environmental considerations for a range of emergency scenarios including tailings release and cyanide spills.

The Emergency Management Plan specifically describes the remediation actions, including material disposal, monitoring and reporting. The CERP references the CSBP Transport Management Plan where the use of chemicals, including ferrous sulphate, hypochlorite and peroxide is prohibited for treatment of cyanide where it has been released to surface water.

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

The operation is:

- ☑ **in full compliance**
- ☐ in substantial compliance
- ☐ not in compliance

with Standard of Practice 7.6

Basis for this Finding/Deficiencies Identified:

The operation's Emergency Management Plan includes the requirement for an annual review. The plan was substantially reviewed and restructured with the Crisis Management Plan in 2009. The Emergency Management Plan describes the requirement to undertake at least one desktop and one emergency exercise annually, although mock drill exercises are undertaken on a more frequent basis, including specific cyanide scenarios within the processing plant.

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

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

The operation is:

- ☑ **in full compliance**
- ☐ in substantial compliance
- ☐ not in compliance

with Standard of Practice 8.1

Basis for this Finding/Deficiencies Identified:

All personnel continue to receive the general induction which includes a section on cyanide awareness. The operation has continued to maintain a training needs matrix and schedule for the

process plant and maintenance personnel which include specific area inductions, cyanide awareness, hazard identification and risk assessment, basic emergency response and first aid training aspects. Cyanide awareness training is subject to annual refresher and records are maintained to demonstrate compliance with this requirement.

A sample of the operations training records sighted during the audit included a theory based competency assessment. Informal interviews with SDGM personnel during the assessment indicated a high awareness and sound knowledge of cyanide aspects.

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

The operation is:

- ☑ **in full compliance**
- ☐ in substantial compliance
- ☐ not in compliance

with Standard of Practice 8.2

Basis for this Finding/Deficiencies Identified:

The operation has continued to maintain a training needs matrix and schedule for the process and maintenance personnel, including specific training modules/procedures for cyanide delivery and unloading, CIL and thickener operation, control room operation, water management, tailings management, pumps, unplanned shutdowns, permits to work, isolation and tagging, HCN monitoring and cyanide spills.

A review of a sample of the process department's hard copy records and the training matrix spreadsheet indicates that all process and maintenance personnel have completed the basic mandatory training relating to cyanide and have or are scheduled to undertake more specific operating procedure training as part of the established competency program.

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

The operation is:

- ☑ **in full compliance**
- ☐ in substantial compliance
- ☐ not in compliance

with Standard of Practice 8.3

Basis for this Finding/Deficiencies Identified:

The operation has continued to maintain a training needs matrix and schedule for the emergency response team, the weekly training sessions for which periodically include cyanide related scenarios. The emergency response team members receive specialist training from accredited external providers participate in periodic mock drill exercises and mines rescue competitions. Mock drills are evaluated for training purposes and are revised as needed.

A sample of individual personnel and weekly training records sighted during the audit identified the individual employee, trainer, training module and theoretical/practical assessments where applicable. The process plant personnel receive basic emergency response training and participate in periodic department specific mock drill exercises.

9. DIALOGUE: Engage in public consultation and disclosure.

Standard of Practice 9.1: Provide stakeholders the opportunity to communicate issues of concern regarding the management of cyanide.

The operation is:

- ☑ **in full compliance**
- ☐ in substantial compliance
- ☐ not in compliance

with Standard of Practice 9.1

Basis for this Finding/Deficiencies Identified:

SDGM continues to communicate with community stakeholders in accordance with its Communication and Stakeholder Management Plan which includes provision of opportunities for stakeholders to communicate concerns through annual open days on site, invitations to respond to annual reports and regular meetings with local pastoralists. Stakeholders are identified through a Stakeholder Register which includes specific identification of Cyanide Management Stakeholders. SDGM records its community concerns through the Public Relations Community Interactions register. No concerns regarding cyanide management at SDGM have been recorded from any of the communications avenues provided for local communities and stakeholders.

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

The operation is:

- ☑ **in full compliance**
- ☐ in substantial compliance
- ☐ not in compliance

with Standard of Practice 9.2

Basis for this Finding/Deficiencies Identified:

The annual SDGM Stakeholder Day is the primary vehicle whereby SDGM provides specific information to community participants on cyanide management through formal information brochures on cyanide and invites inspection of the facilities. These open days are recorded in terms of attendees and agendas. The annual open days are attended by neighboring pastoralists, local government officers, government regulators, nearby mining companies and indigenous community representatives.

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

The operation is:

- ☑ **in full compliance**
- ☐ in substantial compliance
- ☐ not in compliance

with Standard of Practice 9.3

Basis for this Finding/Deficiencies Identified:

Written descriptions of cyanide management practices at SDGM are provided to communities and other stakeholders through the SDGM Cyanide Management information brochure. Cyanide information is also disseminated at the Stakeholder Day whereby local communities and stakeholders are invited to the facility. The Stakeholder Day agenda includes discussion of cyanide management and inspection of facilities. The operation also disseminates information relating to its environmental and safety performance though its annual reporting processes which are publically reported (via its website www.anglogold.com) to stakeholders and regulators (WA Department of Conservation and Environment and the WA Department of Mines and Petroleum). The operation publicly reports information on environmental and safety incidents, including cyanide incidents which have resulted in: hospitalization or fatality; offsite release requiring response or remediation; significant adverse effects to health or the environment; the requirement to report to regulators, or; a breach of statutory limits. No such reportable cyanide incidents had occurred during the period reviewed in the audit.