

***INTERNATIONAL CYANIDE
MANAGEMENT INSTITUTE***

***Cyanide Code Compliance Audit
Gold Mining Operations***

Summary Audit Report

***AngloGold Ashanti
Navachab Gold Mine
Namibia***

***17th – 21st November 2008
& 2nd – 3rd November 2009***



Name of Operation: Navachab Gold Mine

Name of Operation Owner: AngloGold Ashanti

Name of Operation Operator: AngloGold Ashanti

Name of Responsible Manager: Mr Hildebrand Wilhelm, Ore Processing Manager

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Location detail and description of operation:

Navachab Gold Mine is located on the farm Navachab 58, which lies 10 kilometres south-west of the town of Karibib, approximately 170 kilometres west-north-west of Windhoek, Namibia. Gold was first discovered on the farm in October 1984.

Ore is withdrawn from the silo by a 3m x 1m Langlaagte chute equipped with Bester links onto a 1 050mm wide variable speed mill feed conveyor. The mill feed conveyor tonnage is measured by a mechanical weightometer. The mill is operated semi-autogenously with an 8.5% charge of 100mm diameter forged steel balls. Mill discharge is screened over a trommel screen with 20mm diameter apertures. Trommel undersize is pumped by one fixed and one variable speed pump in series to a set of four 600mm diameter cyclones. The coarse cyclone underflow is redirected to the mill feed. The fine cyclone overflow (80% minus 75µm) passes over a set of Delco linear screens with 800µm apertures to remove woodchips.

The milling circuit incorporates a critical size pebble crusher. The grate and lifter pan mill discharge arrangement includes three pebble port screens with 65mm x 110mm slots. These three screens are used to extract critical size pebbles.

The trommel screen oversize, 20mm to 65mm, is delivered by a conveyor to a 2 ft Symons cone crusher with a closed side setting of 18mm. A magnetic belt and a metal detector system removes tramp steel from the crusher feed stream into a scrap steel bin. This arrangement was devised following a mill modelling exercise conducted by Corporate Metallurgy in conjunction with UCT Comminution Research.

An 11% increase in throughput was realised following the removal of debris steel from the circuit. The crushed pebbles then returned to the mill feed hopper by a 650mm wide pocket conveyor with 80mm deep pockets and an ancillary conveyor.

The mill operates at a critical speed of 89% and a power draw of 3 500kW. Its dimensions are 4.9m in diameter and 10.0m in length. The average milling rate is 210 tons per hour (tph) which at a mill utilisation of 94% gives a daily throughput of approximately 4 700 tons.

ADSORPTION

The adsorption section consists of seven 170 m³ adsorption vessels equipped with Mixtec model 3 014 impellers, Sala recessed impeller pumps for carbon transfer and 0.5mm wedge wire Kambalda screens for interstage screening.

The carbon concentration in the vessels is 15 g/l and carbon consumption is 12 g/t. Dissolved gold is adsorbed onto the activated carbon which is moved counter current to the pulp stream at a rate of about 1.3 tons per day.

The adsorption efficiency is approximately 99.04%. Soluble gold losses to residue are typically 0.006 g/t.

ELUTION CIRCUIT

Loaded carbon, with a loading of around 3000 - 4500 g of gold per ton of carbon, is pumped to the loaded carbon screen. The carbon is then dropped into a fibreglass acid column of 7.5m in length and 1.0m in diameter. A hot acid wash using 3% hydrochloric acid is performed.

After the acid wash, the carbon is forwarded into a stainless steel elution column of 7.5m in length and 1.0m in diameter. The 2.25t carbon is heated to 120 °C, a caustic cyanide solution, and then recycle eluate, is used to strip the gold in a split cycle, after which it is then transferred to the catholyte tanks inside recovery. Soft water is then pumped through to give the carbon a final wash and is then stored as recycle eluate for the next batch. The elution efficiency is approximately 98%.

Regeneration of carbon is performed at 720 °C in an electrically heated Wellman rotary kiln. The regenerated carbon activity is typically 92% of virgin carbon. After quenching the carbon is returned to the adsorption circuit.

RESIDUE DISPOSAL

Residue from the adsorption section is pumped for a distance of 3.5 km to a tailings dam, using a series of up to eight Envirotech C frame pumps. The tailings dam is constructed in waste rock wall impoundment using a series of 100mm diameter polyurethane cyclones for wall sealing. A floating return water station with two submersible pumps is employed to return 50% of the tailings dam feed water to the treatment plant process water circuit. The remaining 50% of the tailings dam feed water is lost in the form of evaporation and seepage. The potential evaporation rate for the Karibib area is approximately 3,000mm per annum. At the current treatment rate the TSF has sufficient capacity to 2009.

RECOVERY

The eluate is pumped to a storage tank in the Recovery section. A volume of approximately 32 m³ at a gold tenor of about 250 g/m³ is typically obtained per elution of 2.5 tons of carbon. The eluate is electrowon onto stainless steel wool in two electrolytic cells over 24 hours.

The loaded stainless steel wool is washed using a high pressure washing system. The product is then dried through two filter presses and the cake is dried in a drying oven at 300°C. The dried mass, with a gold content of 70%, is then smelted at 1 185°C in a 75kW single pot induction furnace. The bullion gold fineness is 85% to 90%.

Auditor's Finding

This operation is

X in full compliance

in substantial compliance *(see below)

not in compliance

with the International Cyanide Management Code.

* The Corrective Action Plan to bring an operation in substantial compliance into full compliance must be enclosed with this Summary Audit Report. The plan must be fully implemented within one year of the date of this audit.

Audit Company: Eagle Environmental

Audit Team Leader: Arend Hoogervorst

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Names and Signatures of Other Auditors:

Name : Dawid M. L Viljoen Signature  Date: 4/3/2010


Dates of Audit: 17th – 21st November 2008 & 2nd – 3rd November 2009

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 Mine Operations and using standard and accepted practices for health, safety and environmental audits.


Navachab Gold Mine

Facility


Signature of Lead Auditor

4/3/2010
Date

Navachab Gold Mine


Signature of Lead Auditor

17th February 2010

Auditor's Findings

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.

X in full compliance with

The operation is in substantial compliance with **Standard of Practice 1.1**

 not in compliance with

Basis for this Finding/Deficiencies Identified:

The plant's cyanide manufacturer and supplier, Australian Gold Reagents (AGR), is an ICMI Code Signatory and has achieved full compliance in a verification audit against the ICMI Cyanide Code.

The combined supply and transport contract stipulates that the supplier must be signatory to the ICMI and must be ICMI Code compliant.

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.

X in full compliance with

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

 not in compliance with



Basis for this Finding/Deficiencies Identified:

AGR is responsible for the transport of the cyanide briquettes from their production facility in Kwinana, Western Australia, to the Navachab Gold Plant in Namibia. Responsibilities and accountabilities are clearly defined in the AngloGold Ashanti (AGA) Contract and AGR Transport Management Plan. Both the AGA contract and the AGR Transport Management Plan stipulate in detail, the responsibilities and requirements for packaging and labeling, safety, security, escort, emergency response (spills prevention and clean-up), route planning and risk assessments, community liaison, emergency response resource access and availability, training, and communication.

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

X in full compliance with

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

 not in compliance with

Basis for this Finding/Deficiencies Identified:

The supply and transport contract for AGR stipulates that the transport sub-contractor must be a signatory to the ICMI and must be ICMI Code compliant. Whilst the road transport contractor from the port of Walvis Bay to the mine, Wesbank Transport, is not a signatory, a third party ICMI non-certification transportation audit was undertaken in June 2009 and the sub-contractor found to be fully compliant. A due diligence exercise was undertaken for the sea transport leg and the port of Walvis Bay internally by AGR, and this was reviewed by a ICMI transportation auditor and found to be fully compliant.

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

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

X in full compliance with

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

not in compliance with

Basis for this Finding/Deficiencies Identified:

The operation procures solid cyanide and mixing of solid cyanide is done on site. The plant design was changed and the lime tanks converted to use solid Sodium Cyanide briquettes for making up the cyanide solution for use in the plant. Detailed, professionally designed, drawings for the conversion cyanide mixing area were sighted and signed by a mechanical engineer and a civil and structural engineer. A later report by a professional civil engineer on the cyanide facilities identified some problems which were subsequently repaired and signed off. The current, as well as new, storage area is located on concrete and away from people and surface waters. Secondary containments built from concrete provide a competent barrier to leakages and provide adequate and appropriate containment. The solid cyanide storage area is in a roofed, ventilated structure, with a concrete base and vents in the sides, allowing for adequate air circulation and prevention of weather impacts. Cyanide tanks are equipped with level indicators, interlocked with the transfer pump and water valves and linked to the SCADA system in the control room. Procedures covering cyanide unloading, mixing, transfer and handling of full and empty cyanide boxes were reviewed and found to be effective. The Cyanide areas are fenced and security controlled with adequate controls and separation to prevent mixing with incompatible materials.

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.

X in full compliance with

The operation is

in substantial compliance with **Standard of Practice 3.2**

not in compliance with

Basis for this Finding/Deficiencies Identified:

The site utilizes solid cyanide which is delivered in sea containers which are “destuffed” of their cyanide into secure storage areas. The off-loading and “destuffing” procedures are thorough and detailed. All cyanide containers including the wooden crates, bags and liners are burned directly after make up within the security fence close to the storage and de stuffing site to prevent any re-use. Procedures are in place to cover solid and liquid spill responses. All procedures include step by step task and hazard identification and appropriate actions for normal, abnormal and emergency occurrences. PPE requirements are included in procedures. Use is made of the Buddy system to optimise safety and safe handling and mixing operations are covered by sequenced instructions. Inspection

checklists were sighted and interviews conducted which confirmed cyanide awareness and competency. All reagent cyanide facilities are covered in the preventative maintenance system, with defined maintenance frequencies.

4. OPERATIONS: Manage cyanide process solutions and waste streams to protect human health and the environment.

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

X in full compliance with

The operation is in substantial compliance with **Standard of Practice 4.1**
 not in compliance with

Basis for this Finding/Deficiencies Identified:

The site has 46 cyanide specific procedures for normal, abnormal and emergency conditions, supported by 72 additional standard operating and engineering procedures covering other related processes and plant activities which were extensively sampled, reviewed and found to be effective. The Navachab Gold Mine Residue Disposal New TSF Operating Manual was sighted and reviewed. Monthly weekly and daily inspections of the TSF facilities are undertaken to ensure integrity and safety. A change management procedure is in place and functioning in conjunction with a risk assessment system. Preventative maintenance and inspection is controlled by an electronic system called "PRAGMA". Key pumps, tanks, bunded areas and equipment were checked on the system and found to be systematically maintained through visual and mechanical checks, thickness tests and historical reviews. Routine shiftly, weekly and monthly inspection reports, legal inspections, and checklists were sampled and employees interviewed to check the effectiveness of systems and ensure that proactive and reactive management takes place. There are no scenarios where emergency power is needed during power failures to prevent overtopping as the area is classified as desert and any storm events would be contained, by design, within the plant and the TSF.

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

X in full compliance with



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

X in full compliance with

The operation is in substantial compliance with **Standard of Practice 4.4**
 not in compliance with

Basis for this Finding/Deficiencies Identified:

Averaged WAD cyanide values on the TSF are below 50 ppm (September 2008 – 41.6ppm, October – 47.7ppm). Although the operation has demonstrated WAD cyanide levels below 50ppm, the TSF is fenced off with an electric fence and the gate remains locked to prevent wildlife mortalities from mammal species such as Kudu, Baboon, Zebra, Duiker. A propane canon is used to scare birds and assist in preventing bird mortalities. A Combinox cyanide destruction plant is installed and used when indications are that WAD cyanide increases (due to any increase in cyanide due to operational failures or ore variability / changes). An On line WAD analyser was recently installed on the cyclone delivery lines at the TSF. Results from this unit are used to start detoxification on the plant tails, if required. No wildlife mortalities resulting for cyanide have been reported or recorded.

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

in full compliance with

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

not in compliance with

X not subject to

Basis for this Finding/Deficiencies Identified:

The site has no direct or indirect discharges to surface water.

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

X in full compliance with

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

Basis for this Finding/Deficiencies Identified

Seepage from the TSF is returned from the valley back to the TSF via a retaining concrete wall and pump system. A borehole drilled down stream picks up seepage from the sides of the hill. Monitoring bore holes are in place and sampled, and analysed for WAD cyanide. The TSF walls are equipped with under drain pipes. No jurisdictionally beneficial users are identified. The mine uses current legal standards of <0.5mg/l total CN in the borehole water. Borehole samples indicate values between 0 and 0.12 mg/l total CN. Backfill is not used in the operation.

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

X in full compliance with

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

Basis for this Finding/Deficiencies Identified:

The site's design includes concrete secondary containment for cyanide unloading, mixing and storage tanks, cyanide leach area, CIP area, residue tank and pumps, elution reagents tanks, elution vessel area. Bunding areas are interlinked to maintain the required '110% capacity of largest tank' standard. All secondary containments are equipped with sump pumps to return any spillage back to the process. Sump pumps are started automatically or manually. Reagent strength pipelines from cyanide storage to leach and the elution sections are equipped with secondary containment. Other cyanide solution pipes are placed above concrete and brick paved areas to minimise the impact of leaks. All cyanide pipe flanges are fitted with flange covers to reduce risk of spraying. The TSF pipeline crosses a dry river bed where water flow is infrequent (1 in 5 years observed). The pipeline is a steel continuous welded polyglass lined pipe, placed in a secondary containment where it crosses the river. Drainage from the secondary containment is directed to paddocks on each side. HDPE lined (Pipe in a Pipe between flanges) is used to reduce risk of pipe corrosion failure.

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.

X in full compliance with

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

 not in compliance with

Basis for this Finding/Deficiencies Identified:

Additional tanks for the plant were completed and quality control documentation including concrete and reinforcing specifications was sighted. AngloGold Ashanti corporate Cyanide Plant Specifications were also sighted. An external professional civil engineer's report on the plant was sighted, along with recommendations and "sign off" of completion of the corrective actions. The AngloGold Ashanti annual TSF audit Apr 2007 was sighted where stability concerns and groundwater seepage risks were identified. These were addressed through the establishment of a buttress, backed up by movement surveys of the wall fortnightly.

A PRAGMA PMS system is in place which guides daily, weekly and monthly operational inspections covering all the operations involving cyanide equipment. The daily and monthly reports and checklists for the TSF were sighted and reflected appropriate on-going engineering controls and checks on construction, stability and safety.

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

X in full compliance with

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

 not in compliance with

Basis for this Finding/Deficiencies Identified:

Water monitoring procedure is contained in the operation's ISO system's Water sampling and monitoring procedure which covers the borehole sampling. Specialised cyanide speciation and environmental sampling are covered in a separate procedure. These were developed by the operation's Chief Chemist and Mintek's cyanide specialist. Sampling takes place monthly and quarterly, wildlife inspections are conducted daily. A monitoring program is in place to sample both surface and groundwater for cyanide which forms a

part of the site's environmental monitoring programme which was reviewed. The site's water quality sampling regime was sighted which indicated sample sites, samples types to be taken, and frequency. Detail on sample points was reviewed and found adequate for sample point circumstances.

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 cyanide facilities to protect human health, wildlife and livestock.

X in full compliance with

The operation is in substantial compliance with **Standard of Practice 5.1**
 not in compliance with

Basis for this Finding/Deficiencies Identified:

A procedure covering decommissioning of cyanide facilities is in place and this is used in conjunction with the AngloGold Ashanti Cyanide Guidelines. The procedure includes schedules for decontamination of cyanide facilities. Mine Closure and decommissioning plans are reviewed annually.

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

X in full compliance with

The operation is in substantial compliance with **Standard of Practice 5.2**
 not in compliance with

Basis for this Finding/Deficiencies Identified:

The Mine Closure Plan is reviewed annually with external reviews conducted every three years. The Navachab Gold Mine Business Plan 2008 BP4 Rehabilitation and Mine closure plan and cost estimate (Sept 08) was sighted and includes cyanide specific decommissioning component. Namibian legislation requires the establishment of decommissioning and rehabilitation funds for mines.

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 or control them.

X in full compliance with

The operation is

in substantial compliance with **Standard of Practice 6.1**

not in compliance with

Basis for this Finding/Deficiencies Identified:

The site has 46 cyanide specific procedures for normal, abnormal and emergency conditions, supported by 72 additional standard operating and engineering procedures covering other related processes and plant activities which were extensively sampled, reviewed and found to be effective. Procedures include PPE requirements and appropriate pre-work inspections for various tasks. A change management procedure is in place and functioning in conjunction with a risk assessment system. Worker input is solicited through involvement of workers in risk assessments, HAZOPs, discussions at meetings including monthly health and safety meetings, and safety representatives meetings.

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.

X in full compliance with

The operation is

in substantial compliance with **Standard of Practice 6.2**

not in compliance with

Basis for this Finding/Deficiencies Identified:

The plant optimal pH is confirmed as 9.5. Test work by external laboratories indicated a significant drop in recovery at higher pH adjusted using lime. Leach pH varies between 9.4 and 10.8, with an average of 9.76 for Jan to Nov 2008. A Low pH risk assessment was conducted to identify risks and action required to manage risks of HCN gas. The site has 12 Pac 7000, 6 Miniwarn, and 2 Exam 5000 and 7000 Multi-gas personal HCN monitors and 3 Polytrons fixed HCN monitors. The focus is placed at the leach, CIP and residue where the potential for HCN gas is higher with 3 fixed Polytrons installed at the leach dosing point, CIP no 1 and residue. The areas are access controlled using gates, backed up with a standing instruction for entering the area. Fixed and mobile HCN gas

monitors are used on site and are calibrated and maintained according to procedures in excess of manufacturers recommendations (6 monthly instead of annually) by on site staff trained by the manufacturers. On-going inspections and checks are also used to monitor and check facilities and emergency response equipment functioning. Safety equipment such as safety showers, low pressure eye wash stations, and dry powder fire extinguishers are numerous and adequately signposted. A site wide pipe colour coding system is in operation which includes cyanide pipe colour coding and directional flow signage. Formal employee interviews were used to check awareness and sensitivity to health and safety measures and the response from employees was found to be appropriate and acceptable. An on site Accident and incident reporting and investigation policy was found to be in place and effective.

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

X in full compliance with

The operation is

in substantial compliance with **Standard of Practice 6.3**

not in compliance with

Basis for this Finding/Deficiencies Identified:

Cyanide emergency procedures and the Emergency Preparedness Plan form part of the site-wide emergency preparedness plan which covers the whole site and includes the cyanide facilities. The plant uses radios for primary and emergency communication, backed up by cell phones and man down alarms linked to the control room SCADA. The plant has four fully equipped emergency stations (antidote, medical oxygen, resuscitator and SCBA equipment), with one located on the TSF. Antidote is used and stored in fridges according to manufacturer's guidelines. Two registered nurses experienced in cyanide protocol and first aid and an ISOS advanced life support paramedic are available on site. 17 people on site are trained in advanced cyanide first aid to provide immediate first aid. A fully equipped emergency trailer is also available at the site. Equipment is regularly inspected and tested and mock drills are held on site and in conjunction with the designated hospitals in Windhoek. Interviews confirmed employee knowledge of cyanide hazards, and emergency response.

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.

X in full compliance with

The operation is

- in substantial compliance with **Standard of Practice 7.1**
- not in compliance with

Basis for this Finding/Deficiencies Identified:

The site has used a risk assessment to develop site-specific emergency scenarios and responses for its emergency preparedness plan. There are no communities or individuals within close proximity of the plant and they, therefore are not included specifically in the Plan. The emergency preparedness plan combines existing procedural responses and emergency provisions to deal with the various scenarios and includes and identifies the emergency response team and coordinators who are on all shifts. The AGR Transport Management Plan covers transportation-related emergencies.

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

X in full compliance with

The operation is

- in substantial compliance with **Standard of Practice 7.2**
- not in compliance with

Basis for this Finding/Deficiencies Identified:

The workforce and ISOS medical staff were involved in Emergency Preparedness Plan risk assessments. No potentially involved communities identified, nor where they involved because they would not be affected by any emergency. Copies of the plan were issued to shift foreman for feed back and use with plant operators and this was verified during interviews. The Emergency Preparedness Plan was mentioned during stakeholder presentations and discussions with worker spouses, community members, and government representatives. Mock drills are a major means of communicating with stakeholders on the Emergency Preparedness Plan. Presentation materials and documentation on the communications was sighted. Full cycle drills are used to involve and communicate to hospital staff.

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

X in full compliance with

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

 not in compliance with

Basis for this Finding/Deficiencies Identified:

The Emergency Preparedness Plan details clear duties, roles and responsibilities for the various emergency scenarios. Emergency equipment lists were checked and site inspections confirmed availability and readiness. The Plan includes contact references (telephone, cell phone, etc) of internal and external resources for the various scenarios, particularly with detail where external resources and skills might be needed. Emergency Team members were checked and training records and assessments showed the individuals to be well prepared and well equipped for cyanide emergencies. Periodic full scale drills involving internal and external stakeholders ensure that roles and responsibilities are understood and clearly implemented.

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

X in full compliance with

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

 not in compliance with

Basis for this Finding/Deficiencies Identified:

The Emergency Preparedness Plan includes full details for appropriate emergency notification and reporting and the call-out procedure and contact information lists which are updated regularly. Media communication is done via a formal procedure. A policy is in place for communication with the mining authorities and interested and affected parties are communicated with through a formal procedure.

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

X in full compliance with

- The operation is** in substantial compliance with **Standard of Practice 7.5**
- not in compliance with

Basis for this Finding/Deficiencies Identified:

The Emergency Preparedness Plan cross-references to detailed and specialised procedures which cover clean-up and remediation relating to releases, pipeline failures and spills, as appropriate to the site-specific identified scenarios. Use of neutralization processes and materials is clearly covered, as is disposal of contaminated materials and the use of treatment chemicals such as ferrous sulphate in surface water is prohibited. Cyanide spillage procedures also cover remediation issues. No provision for drinking water is in place as there are no users sufficiently close enough to be affected by cyanide emergencies.

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

X in full compliance with

- The operation is** in substantial compliance with **Standard of Practice 7.6**
- not in compliance with

Basis for this Finding/Deficiencies Identified:

Plan review and response is fully covered within the Plan under its maintenance and change management section. Quarterly, scheduled mock drills also trigger the needs for review.

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.

X in full compliance with

- The operation is** in substantial compliance with **Standard of Practice 8.1**
- not in compliance with

Basis for this Finding/Deficiencies Identified:

All personnel are trained in basic cyanide awareness and basic cyanide training. The Induction SHE (Safety, Health & Environment) booklet (given to all mine employees) contains sections on Safe handling and working with chemicals, cyanide awareness, and chemical reagent awareness. Contractors are included in the induction program. A training matrix is used to define training needs for all mine employees including contractors. Every plant employee, including contractors is given basic cyanide as well as first aid training, followed by refresher training every 6 months on basic cyanide training, with first aid training every 3 years. A review of training records of interviewees verified compliance. Training records are kept for a minimum of 40 years.

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.

X in full compliance with

The operation is

in substantial compliance with **Standard of Practice 8.2**

not in compliance with

Basis for this Finding/Deficiencies Identified:

All employees working with cyanide receives intermediate cyanide training. A spreadsheet matrix is used to identify required training courses and is used to monitor training completion. Cyanide appointees receive advanced cyanide training. 17 employees are cyanide appointees (employs appointed by the ore processing manager to work within a cyanide area) and include cyanide destuffing, mixing operations as well as engineering staff working on reagent strength cyanide. Training courses include Basic cyanide first aid, Artificial respiration, SCBA training, Buddy training, Canister training, PAC 7000 training, Miniwarn (monitor) training and gas monitoring . The Buddy training program was reviewed. Operational training courses include all relevant section operations using self study process modules and on the job training by Section Foremen, followed by PTO's (Planned Task Observations) and written tests. Illiterate employees are scheduled for the ABET literacy courses and checked orally and via PTOs. This was verified during a review of training records of interviewees. All foremen are receiving additional coaching skills training and Training Officers are formally trained and accredited as Trainers. All new employees receive basic cyanide training and are tested with an 80% pass mark required. Transferred employees receive plant specific induction. Plant personnel receives module training on the job, directed by the Foreman and are tested by the Training officer before being allowed to take over the shift and operate cyanide equipment.



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

X in full compliance with

The operation is

- in substantial compliance with Standard of Practice 8.3
- not in compliance with

Basis for this Finding/Deficiencies Identified:

All plant personnel were trained in the emergency response procedure. A dedicated emergency response team is in place to react on cyanide emergencies. All cyanide workers receive intermediate cyanide training including cyanide first aid. Mock drills and mini training drills are conducted regularly involving all plant personnel. The Section Foreman in the control room is the emergency response communicator, who then reports to the section foreman who will investigate. The section foreman will contact the ISOS (ambulance response) and sister on site or on standby. The day gang act as the emergency response team during day shift. After hours, shift personnel act as emergency response team with drills being held to cover all shifts. Current emergency response team members received advanced cyanide emergency training including rescue and first aid. ISOS is contracted to provide an emergency service with patients transported by ambulance to the designated hospital in Windhoek, if appropriate. On site security provides rapid access control. Refresher training is conducted 6 monthly, advanced training two yearly, and first aid training three yearly. Mock drills are conducted regularly with training officer, safety officer and cyanide champion in attendance. Records will be kept for 40 years but the operation has only been running for 17 years to date.

9. DIALOGUE: Engage in public consultation and disclosure.

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

X in full compliance with

The operation is

- in substantial compliance with **Standard of Practice 9.1**
- not in compliance with

Basis for this Finding/Deficiencies Identified:

Stakeholders are invited, via a newspaper advertisement, to the Annual EMS stakeholders meeting. Meetings include a wide cross section of the community, including community leaders, business, and home owners and press. The last meeting was attended by 32 registered attendants. The 2008 presentation included information on cyanide management on site and the opportunity to ask questions. School visits were conducted in 2007 and an employees spouses meeting was held in 2008. Feed back is obtained and questions are answered during the meetings.

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

X in full compliance with

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

 not in compliance with

Basis for this Finding/Deficiencies Identified:

Separate meeting for questions and communication are not held and the evidence for 9.1 and 9.2 is the same. Stakeholders are invited, via a newspaper advertisement, to the Annual EMS stakeholders meeting. Meetings include a wide cross section of the community, including community leaders, business, and home owners and press. The last meeting was attended by 32 registered attendants. The 2008 presentation included information on cyanide management on site and the opportunity to ask questions. School visits were conducted in 2007 and an employees spouses meeting was held in 2008. Feed back is obtained and questions are answered during the meetings.

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

X in full compliance with

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

 not in compliance with

Basis for this Finding/Deficiencies Identified:

Community of Karibib is 80% employed by the mine where employees are given induction material containing information on cyanide. The AngloGold Ashanti website contains basic cyanide information. Environmental management meeting presentation was handed out at the annual stakeholders meeting, containing information on TSF, which included basic cyanide awareness.

A Communication protocol is in place covering (Safety, health or environmental) incident categories from levels 1 to 3. **Level 1 incident**: is contained or controlled within a specific area (plant TSF or bund). The incident is dealt with within the locality. **Level 2 incident** : has the capacity to spread or may have influence on neighbouring activities or enlarge and may require internal / external emergency resources. The incident or emergency is dealt with by the incident management team. **Level 3 incident** : significant in size and requires external support and communication are dealt with by the Managing Director Navachab and Corporate Office AGA Southern Africa environmental reporting procedure was sighted.

The AngloGold Ashanti Corporate requirements indicate that level 2 and 3 incidents are reported in the annual report. Cyanide usage and management, including incidents, features in the AngloGold Ashanti report to society 2007, appearing on the AngloGold Ashanti website. The annual report of 2007 was reviewed.

AngloGold Ashanti Corporate requirements indicate that level 2 and 3 incidents are reported in the annual report. All level 3 incidents are reported to the Government Engineer and corporate reporting procedures are followed.

