

***INTERNATIONAL CYANIDE
MANAGEMENT INSTITUTE***

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

Recertification Summary Audit Report

***AngloGold Ashanti
West Gold Plant
South Africa***

5th – 9th July 2010



Name of Operation: AngloGold Ashanti West Gold Plant
Name of Operation Owner: AngloGold Ashanti
Name of Operation Operator: AngloGold Ashanti
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Location detail and description of operation:

AngloGold Ashanti West Gold Plant is situated in the North West Province of South Africa, approximately 4 km west of Orkney. The plant treats reclaimed waste rock dump material from the No 1, 3 and 4 waste rock dumps to a milling capacity of 180,000 tons per month. Residue from the plant is pumped to the Tailings Storage Facilities situated at the West Extension slimes. West Gold plant is the newest of the Vaal River Operations Gold Plants of AGA AURM (AngloGold Ashanti Africa Underground Region Metallurgy).

The plant utilizes two semi-autogenous, ROM mills in the comminution circuit, which is then followed by a thickening section where lime is added to condition the slurry prior to cyanide dosing in the pre-leach section.

The pre-leach section consists of four mechanically agitated, flat-bottomed leach vessels, into which oxygen is injected to achieve the required dissolved oxygen concentration for gold dissolution. The leach pulp gravitates to the carbon in leach (CIL) vessels.

The CIL section of the plant consists of eight mechanically agitated, flat-bottomed vessels operated in a carousel mode, whereby the carbon is contained the same vessel. Pulp is fed to the first CIL vessel and gravitates through the circuit to the residue vessel. The plant residue is pumped to the West Extension Tailings Storage Facilities. Gold loaded carbon is removed daily from the CIL circuit.

The loaded carbon is washed with diluted hydrochloric acid to remove calcium and base metal impurities from the carbon. The spent hydrochloric acid is discarded into the residue stream.

The acid treated, loaded carbon is then transferred to an elution column. The West Gold Plant has opted for the Zadra elution process. Barren eluent with diluted caustic heated to 130°C is used to elute the loaded gold from the carbon. Stripped gold-cyanide eluate exiting the elution column as pregnant passes continuously through the electro-winning cells, where the gold is stripped from solution and deposits onto the cathode. The stripped barren solution is recycled back into the elution circuit.

The eluted carbon is regenerated through a regeneration kiln at 750 °C to remove volatile fouling on the carbon. The regenerated carbon is then returned to the CIL circuit. The cathode gold sludge is calcined and smelted to produce gold bullion bars which are refined at the Rand Refinery for sale.



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

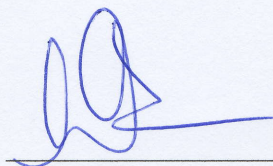
Audit Team Leader: Arend Hoogervorst

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Names and Signatures of Other Auditors:

Name : Dawid M. L Viljoen

Signature



Date:

7/12/2010

Dates of Audit: 5th – 9th July 2010

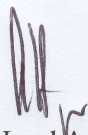
I attest that I meet the criteria for knowledge, experience and conflict of interest for Code Verification Audit Team Leader, established by the International Cyanide Management Institute and that all members of the audit team meet the applicable criteria established by the International Cyanide Management 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 Mine Operations and using standard and accepted practices for health, safety and environmental audits.

West Gold Plant

Facility

Signature of Lead Auditor



7/12/2010
Date

West Gold Plant

Signature of Lead Auditor

7th December 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:

There is an AngloGold Ashanti cyanide supply contract, covering all AngloGold Ashanti Gold Plants, including the West Gold Plant, in place with SASOL Polymers, as the sole supplier of liquid Sodium Cyanide, delivered by bulk tanker. The contract requires that the producer or supplier of cyanide must be a signatory to the ICMI Code and the producer or supplier must be ICMI certified. SASOL Polymers is a signatory to the Cyanide Code and was re-certified as a fully compliant Production Facility with the ICMI Cyanide Code on 2 March 2010.

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:

The supply contract between SASOL Polymers and AngloGold Ashanti specifically covers the responsibilities and requirements for transport, safety, security, unloading, emergency response (spills prevention and clean-up), route planning and risk assessments, community liaison, emergency response resource access and availability, training, and communication. SASOL Infrachem SiLog was re-certified on 13 January 2010 as a fully ICMI Code compliant transporter.

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 AngloGold Ashanti supply contract requires that the producer/supplier of cyanide must be a signatory to the ICMI Code and the producer supplier and transporter must be ICMI certified. SASOL Infrachem SiLog was re-certified on 13 January 2010 as a fully ICMI Code compliant transporter, thus meeting all the requirements for appropriate emergency response planning and cyanide management.

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 uses only liquid cyanide, delivered by bulk tanker, and no mixing or storage of solid cyanide takes place on site. Original drawings and professional engineers inspection reports for the cyanide offloading and storage facilities were sighted during the

certification audit of 2007 and no changes have been made since. The bund and tanker offloading areas are concrete lined, equipped with spillage sump and pump and the tanks are placed on steel legs in the concreted bund area. The cyanide offloading and storage area is located across the road from engineering workshops. Special precautions to reduce the exposure risk include the use of fixed hydrogen monitors with alarms and the area and road is barricaded off during offloading operations to prevent people from entering the danger zone. The area is also fully contained to prevent potential exposure to workshop users. The facilities were built with materials appropriate for use with sodium cyanide. Cyanide offloading takes place on a concrete surface designed to contain spillage, drain into main bund area, where it is pumped back to the leach tanks or the storage tanks. Cyanide areas are away from incompatible materials and within the access controlled plant security area which is securely fenced. Level and capacity of tanks are determined before offloading and verified against a cyanide tank chart. All tanks equipped with level indicators and a high level alarm. An automatic air valve is interlocked with the offloading process and closes at 85% of operating level, stopping transfer from road tanker to tanks. The procedure covering cyanide unloading was reviewed and found to be effective.

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:

Only liquid cyanide is used and is delivered via bulk tanker to storage tanks and no mixing or storage of solid cyanide takes place on site. The offloading procedure is detailed, spelling out PPE requirements, use of a buddy in the process, and clearly sequenced to prevent spillages and accidental releases during off-loading.

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 fifty procedures specifically dealing with cyanide management, fifteen general and general emergency procedures, twenty four environmental management and protection procedures and twelve emergency preparedness procedures. The TSF contractor has thirty safe work procedures for use on the TSFs and a mandatory Code of Practice (COP) and operating manual covering TSF operations for the Vaal River area is also in place. The freeboard and design storm event (1.3m and 1:50 year 24 storm event) is defined in the COP. The latest annual report by a professional engineer concluded that the TSFs at the Vaal River area are generally in a good condition. Stability analyses are conducted and reported in annual and separate reports and indicated satisfactory results. Routine daily, weekly, monthly and quarterly inspection reports, legal inspections, and checklists for proactive and reactive management on the plant and TSF were sampled to check the effectiveness of systems. Piezometer levels and freeboard are surveyed monthly and quarterly surveillance meetings are used to report and evaluate results. Surface water diversions are inspected as part of the daily inspections and all return water dams are equipped with level indicators and transmitters displaying on the SCADA system. There is a probabilistic water balance in place, and no scenario has been identified where the need has been highlighted to shut down plant to prevent overtopping. A CMMIS (Computerised Maintenance Management Information System) planned maintenance system and procedure, supported by a SIMM (Structural Integrity Management Monitoring) system is in place and functioning. All tanks, pipes, pumps and valves are on the CMMIS (computerised maintenance management information system) system, and all pipes thickness tested with the frequency based on actual thickness. The nature and date of corrective actions are documented using the IRMS (Integrated Risk Management System) system which also monitors and records progress and close out of corrective actions. Operational inspections conducted include: shiftily inspections; cyanide storage facility daily inspections; legal two weekly inspections; PCR (Physical Condition Rating) inspections; and Shift foreman's daily inspections. Tank thickness testing is done on a planned basis for all high and low strength cyanide tanks. Both the plant and the TSF contractor have change management procedures covering health, safety and environment in place and operational.

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

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

not in compliance with

not subject to

Basis for this Finding/Deficiencies Identified:

A cyanide optimisation program covering process and cyanide addition rate optimisation is in place. The ore mix fed to the plant changed from a mix of reef and waste to only waste rock during December 2009. Cyanide addition was reduced from 220ppm to 190ppm in the pre-leach for the waste. Longer term optimisation will include plant trials in stepwise reduction of cyanide in the pre-leach, while monitoring WAD cyanide, terminal cyanide and recovery. Cyanide feed control involves a flow based ratio control with a TAC2000 on-line free cyanide analyser providing input into the control algorithm. A Cynoprobe WAD cyanide/Free cyanide on-line analyser is installed on the tailings and the optimisation program will consider the integrated use of all instruments.

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

X in full compliance with

The operation is

in substantial compliance with **Standard of Practice 4.3**

not in compliance with

Basis for this Finding/Deficiencies Identified:

A probabilistic water balance for Vaal River TSF complex, including all the TSFs and return water dams, and a comprehensive plant probabilistic water balance covering the required aspects for the plant, is in place. Rainfall scenarios were used to determine return dam operating levels and emergency strategies to prevent overtopping. Information is included in the probabilistic water balances on rainfall, 1:50, and 1:100 year, 24 hour storm events, evaporation, and solution deposition. Rainfall data is collected daily on the TSFs and the plant and combined with local rainfall measurements and data from the SA Weather Bureau. No run on occurs as all the TSFs and return water dams are on higher level than ground level. The power outage and equipment outage scenarios were modelled and the anti-pollution dams were confirmed to be sized to contain all water in the case of power outage and equipment failures if operated at 20% capacity level. Phreatic level measured and stability analyses conducted every two years, with recommendations made on freeboard and pool management.

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:

WAD cyanide is measured at the plant tailings tanks, using an on-line cynoprobe WAD analyser, and no values above 50 ppm WAD cyanide are allowed to be pumped to the TSFs. The West complex tip points' samples are less than 25 ppm (Jan 2007 to 2009), and less than 30 ppm (Jan 09 to 2010), and return water dams (Bokkamp) less than 15 ppm (2007 to 2010). All return water dams are containing less than 50 ppm WAD cyanide and do not therefore require any special measures to restrict access by wildlife. Wild life mortality inspections are conducted daily and no cyanide-related mortalities have been reported for the whole Vaal River TSF complex or at the West Gold plant during the period since certification.

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

X in full compliance with

The operation is

in substantial compliance with **Standard of Practice 4.5**

not in compliance with

Basis for this Finding/Deficiencies Identified:

No direct discharges to surface water from cyanide facilities under normal conditions exist. Upstream WAD cyanide values from the Vaal River are at less than 0.217 ppm (other non-signatory gold mining operations are operating upstream of the Vaal River Operations). The Schoonspruit (stream) is sampled up and downstream of the plant and TSF, with values between limits of detection 0.025 and 0.041 ppm WAD cyanide. No established mixing zone has been identified by regulatory authorities. Borehole samples from the river banks show values of less than 0.02ppm WAD CN (Samples reviewed from 2007 to May 2010.)

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

The Plant design includes hard surfaces, and is equipped with storm water impoundments and cut-off trenches outside of the plant area to separate clean and dirty water. Thus no seepage occurs. At the TSFs, clean/dirty water separation trenches are in place. The Bokkamp dam is equipped with cut-off trenches, and the Woodland project (trees absorbing water) operates at the Mispah and West slimes dam complexes to prevent seepage from contaminating ground water. The TSFs have under drains and trenches to collect seepage and prevent contamination. Borehole analyses indicated levels of less than 5 ppm. The Vaal River dewatering project includes the use of interception boreholes drilled on the bank of the Vaal River where seepage in the groundwater is pumped into a tank and recycled to the plants for operational use. Mining processing plants process water is the only beneficial use of groundwater, with all other water for domestic and livestock use being supplied from the Midvaal Water Company in pipes. The National Water Act limit is 0.5ppm cyanide, not specifying the species of cyanide.

Borehole sample values up stream and down stream of the plant for July 2007 to Oct 2009, varied between 0.09 and 0.276 ppm WAD cyanide. Boreholes south of the Pay dam had values of less than 0.02 ppm WAD CN. A Mispah borehole had the highest value of 0.033 WAD cyanide (from 2007 to 2010). The East complex had a high value of 0.17ppm WAD cyanide. The Bokkamp dam's highest value was 0.130 ppm WAD cyanide (2007 to 2010), and the West Complex's highest value was 0.076 WAD cyanide (2007 to 2010).

The plant does not have a backfill operation on site.

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 reagent strength cyanide tanks are placed on legs inside a concreted bund. The pre-leach and CIL tanks are placed on solid concrete basis. (Original drawings were sighted and confirmed during the certification audit.) All other solution tanks are placed on concrete bases. The WAFU (West Acid Float Uranium) residue tanks are conical tanks on steel legs. All tanks are located within bunded concrete areas. All cyanide containing slurry and solution pipelines are installed over bunds, concreted surfaces with all spillages routed to the anti-pollution dams or into the bunds. The residue pipelines feeding the WAFU (West Acid Float & Uranium) residue tanks are included in the CMMIS (planned maintenance) system which includes thickness tests and pressure monitoring takes place to detect major pipe failures. All unlined slurry pipelines are part of the CMMIS system. Pipelines are being lined with HDPE, urethane and rubber where

previous leaks occurred. All new pipe lines will be lined. Pipelines where risk of pollution exists are placed in earth trenches to prevent spillage from entering the environment. All reagent strength cyanide pipelines are equipped with secondary containment systems draining back to the reagent strength bund area. All pipelines inside and outside the plant are subject to the plant CMMIS (planned maintenance) system. Cyanide tanks and pipelines are manufactured from materials compatible with cyanide and high pH conditions, as per the AngloGold Ashanti Cyanide Guidelines document.

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:

No new cyanide facilities or major modifications or additions to the existing facilities were constructed or implemented since the first certification audit and the original certification evidence of Quality Control and Quality Assurance still applies. The SIMM (Structural Integrity Management Monitoring) system is used to do maintenance planning of major capital equipment on the plant. The latest SIMM Report, signed by a professional engineer, indicated that no major issues were raised that would prevent the plant from being operated within the established parameters consistent with the Code's principles and standards of practice.

The Mispah Dam extension was subject to an extensive quality assurance programme. The Fraser Alexander (TSF Contractor) Construction Quality Assurance file for the extension was reviewed and found to include laboratory test registers, In-situ density determination, final inspection snag lists, Quality Control Manager's documentation, backfill inspection records, and post-concrete inspection record. The latest annual TSF audit report of Sept 2009 signed by a professional engineer concluding that the TSFs at the Vaal River are generally in a good condition and no significant issues were noted.

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:

Procedures for environmental monitoring (including sample preservation and chain of custody procedures) of surface water and borehole water, developed by competent persons, were sighted and checked. Boreholes are placed and sampled upstream and downstream of the plant, The Vaal River is sampled up and downstream of mine. Plant boreholes are sampled quarterly, wildlife is monitored daily, surface water is sampled monthly and plant boreholes are sampled quarterly.

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 formal decommissioning procedure is in place. The procedure includes a formalised schedule for decommissioning. The decommissioning plan is 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 "AngloGold Ashanti annual review and update of 2009 environmental rehabilitation and closure estimate" used the WAFU (West Acid Float Uranium) plant rehabilitation costs by an outside contractor and the cyanide producer as a basis for the cyanide decommissioning estimates. The cost update for West Gold plant of November 2009 was sighted and the estimate is reviewed annually. The AngloGold Environmental Rehabilitation Trust Fund (as required by SA Law) includes provision for decontamination of the cyanide equipment at West Gold Plant. Estimates include line

items which are:- decontamination of storage and dosing system, flame cut old sodium cyanide tanks, chemical cleaning of storages, decontamination of SASOL tanker, and associated medicals, induction, screening training and travel. A signed audit report for the trust fund by accountants Ernst and Young, dated 7 April 2010 was sighted.

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 fifty procedures specifically dealing with cyanide management, fifteen general and general emergency procedures, twenty four environmental management and protection procedures and twelve emergency preparedness procedures. The TSF contractor has thirty safe work procedures for use on the TSFs and a mandatory Code of Practice (COP) and operating manual covering TSF operations for the Vaal River area is also in place. The freeboard and design storm event (1.3m and 1:50 year 24 storm event) is defined in the COP. The latest annual report by a professional engineer concluded that the TSFs at the Vaal River area are generally in a good condition. Stability analyses are conducted and reported in annual and separate reports and indicated satisfactory results. Routine daily, weekly, monthly and quarterly inspection reports, legal inspections, and checklists for proactive and reactive management on the plant and TSF were sampled to check the effectiveness of systems. Both the plant and the TSF contractor have change management procedures covering health, safety and environment in place and operational.

All procedures stipulate what PPE must be used for specific tasks. Mini risk assessments are conducted before any maintenance or special operational task is conducted. The TSF contractor has done risk assessments for each procedure which has involved management, supervisors and workers. Procedures are also discussed at plant Safety and Health and Environment meetings. Green area meetings are used as a input and feedback on procedures.

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 instrumentation functional specification for pH control is set at 10.5 with an interlock to Cyanide pumps activated at pH 10.0, and alarming at pH 10.5. The Hotspot survey indicated no detectable cyanide levels. The calibration certificates for four fixed Polytrons units (one at the cyanide dosing point, one at the residue, and two at Offloading) and 2 X-am 5000 and 9 PAC 7000 personal monitors were sighted for the previous twelve months. Plant calibration frequency is 3 monthly and the manufacturers requirement is a minimum of 6 monthly. The personal monitors are set to alarm first at 7.5ppm (warning intermittent) and 10 ppm LEL (Lower Exposure Limit) which is a continuous alarm. The 4.7ppm level is the TWA (Time Weighted Average) over 8 hours. On-going inspections and checks are also used to monitor and check facilities and emergency response equipment functioning and checklists covering three years since certification were sampled. Safety equipment such as safety showers, low pressure eye wash stations, and fire extinguishers are numerous and adequately signposted.

Slurry pipelines are marked as poisonous water. Eating and drinking is only allowed in dedicated areas and this is indicated on signs and trained and reinforced during annual induction of contractors and plant staff. The required signs are placed at the cyanide storage, cyanide/caustic make up and cyanide dosing point, leach, CIP and residue areas. All cyanide pipelines are colour coded, and labelled with flow direction. MSDS documentation and cyanide first aid information was located throughout the plant. Formal employee interviews were used to check awareness and sensitivity to health and safety measures and the response from employees and contractors alike, was found to be appropriate and acceptable. Accident and incident reporting and investigation procedures, based upon the site safety reporting requirements, were 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:

A cyanide emergency cabin is in place on the plant equipped with water, oxygen, a resuscitator, antidote kits, stretchers and the required PPE. A cyanide emergency cabin is placed at the cyanide offloading and storage section, as well as on the top of the CIL section. Four man down alarms are strategically placed on the plant, radios are issued and telephones are available at cyanide storage. A fully equipped cyanide emergency trailer is stationed on the plant. Inspection lists for the antidotes, oxygen BA sets, safety showers,

Oxygen cylinders, and first aid boxes were inspected and confirmed for the whole plant. Antidotes are replaced through a central prompting system covering all AngloGold Ashanti gold plants. The antidote kits are all stored in fridges and were all found to be current. The Plant has trained cyanide emergency teams for each shift in place. The team members are all trained in cyanide emergencies. The West Vaal hospital is the captive Company hospital to treat cyanide cases with ambulance contractor, ER 24, available on site for patient transport and paramedical services. Cyanide equipment is regularly checked and tested and mock drills are held regularly on site.

Man down drills are used to assure that the medical facility is competent and equipped to handle emergencies. Hospital staff are specifically trained to handle cyanide emergencies.

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 West Gold Plant Emergency Response Plan includes cyanide scenarios as per a HAZOP study of emergency scenarios assessment for the West Gold plant. The emergency response plan is linked to specific emergency situations and the appropriate procedures and responses within the site's systems. The Emergency Response Plan includes escalations of emergency levels from level 1 to level 2 or level 3 defined in plan and includes managing such issues as plant and community evacuation and community impacts. These preparations are regularly reviewed in the light of changes, mock drill learning points and employee feedback.

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:

HAZOP and risk assessments involve the work force and the update of risk assessment on emergency scenarios include the full-time Health & Safety Steward and the Cyanide Champion. Green Area meetings and Safety and Health meetings are used to highlight and discuss cyanide issues, including the Cyanide Emergency Response Plan. Emergency drills are used to involve the workforce in the response planning process and drill reports sighted indicated evaluation and feedback. The community is not directly involved in the Plan but is informed on its contents during dialogue sessions. Drills are used to involve the West Vaal hospital, ambulance and paramedic staff in planning and review processes.

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 Response Plan details clear duties, roles and responsibilities for the various emergency scenarios. The emergency equipment inventory was 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. Periodic 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 details for appropriate emergency notification and reporting (internal and external) and the call-out procedure and contact information lists which are updated regularly. Internal and external communication (including the Media) is dealt with in the Plan.

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 Response 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.

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:

The Plan is required to be reviewed annually, following incidents and emergency drills or when new information regarding cyanide becomes available. The report of a drill which included a cyanide spill and cyanide related injury was sighted. Evidence was sighted of learning points emerging from the various cyanide man-down drills.

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 staff entering the plant gate receives 2 days induction refresher valid for 18 months, basic cyanide first aid valid for 12 months. Written tests are conducted with an 80% pass mark. All contractors working on the plant for longer than 2 days will receive the same induction as above, including any work involving the reagent strength cyanide facilities. All contractors or visitors working less than 2 days (working under direct supervision of a plant employee) will receive plant specific induction which includes cyanide overview. A Training matrix is in place for staff and permanent contractors. Induction refresher training is done 18 monthly, cyanide related training 12 monthly, and all long term contractors induction refresher is done annually. A training matrix with a flagging system is used to ensure all staff is covered. Selected employees were checked in interviews on their understanding of cyanide hazards, first aid and emergency response and this was further verified through checking of their training records. Training records are kept permanently.

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:

A formal training matrix covers all process and engineering staff and National Unit Standards are used as a basis for the training. Competency is tested by on the job competency assessments. No refresher training is done on National Unit Standards, but task assessments are done to ensure continued competency. Retraining is done in the case of deviations or substandard activity. On the job training is done using unit standards followed by assessment. Regular Task Assessments are done to measure continued competency. Records are kept permanently, and at least throughout an individual's employment. An electronic back up system is also in place.

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:

The Cyanide Emergency Response Team is in place on dayshift and only cyanide appointees form part of the cyanide teams. Only cyanide appointees may work with high strength cyanide and they are trained in the procedures to be followed in the event of a cyanide release and for decontamination and first aid, and “off loading of liquid Cyanide from a road tanker into a bulk storage facility”, and “handling liquid cyanide safely in a metallurgical plant”. The training matrix specifies training as per the Emergency Preparedness Plan (EPP). The shift foremen are trained in cyanide emergencies on afternoon and night shift and take responsibility as incident commander. Shift teams takes part in after hour drills as part of emergency training. The EPP is trained through the emergency drills, and no classroom training on the use of the actual plan and documentation is currently taking place. All Cyanide Appointees receive advanced training, including BA set training. The Western Deep Levels Hospital and ER24 staff receives cyanide first aid intermediate training and are assessed for competency. They are also involved in drills for training purposes. The plant training officer is present at all drills and evaluates training effectiveness and reports to the AngloGold Ashanti central training unit where any changes to training procedures are made and implemented. Records are kept permanently, and at least throughout an individual’s employment.

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:

Dialogue meetings are two-way dialogue sessions involving both dissemination of information and the answering of questions on cyanide. Farmers along Elandsfontein Spruit attended meetings in July 2008, 16 Feb 2009 and an annual meeting on 14 Jan 2010 (which included a discussion on cyanide). An emergency response workshop in 2007 included the Klerksdorp Fire and Rescue Department, Klerksdorp Traffic Department, Potchefstroom Fire Service, SASOL Emergency Service, Provincial Dept, Merafong Fire and Rescue Department, Potchefstroom Traffic Dept, the Randfontein Public Safety Dept, and the Randfontein and Weston Area Emergency Medical Services. A NUF COR emergency response workshop was held in March 2010. Cyanide Management Brochures were issued to local workers, hostel and township dwellers which included cyanide information, emergency information, exposure, and uses of cyanide. Additional leaflets containing TSF warnings, electricity, vehicle safety, and TSF

water safety were distributed on Arbor Day 2009. A Wedela township community presentation given jointly by AngloGold Ashanti and Harmony was also sighted.

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:

Dialogue meetings are two-way dialogue sessions involving both dissemination of information and the answering of questions on cyanide. Farmers along Elandsfontein Spruit attended meetings in July 2008, 16 Feb 2009 and an annual meeting on 14 Jan 2010 (which included a discussion on cyanide). An emergency response workshop in 2007 included the Klerksdorp Fire and Rescue Department, Klerksdorp Traffic Department, Potchefstroom Fire Service, SASOL Emergency Service, Provincial Dept, Merafong Fire and Rescue Department, Potchefstroom Traffic Dept, the Randfontein Public Safety Dept, and the Randfontein and Weston Area Emergency Medical Services. A NUFCOR emergency response workshop was held in March 2010. Cyanide Management Brochures were issued to local workers, hostel and township dwellers which included cyanide information, emergency information, exposure, and uses of cyanide. Additional leaflets containing TSF warnings, electricity, vehicle safety, and TSF water safety were distributed on Arbor Day 2009. A Wedela township community presentation given jointly by AngloGold Ashanti and Harmony was also sighted.

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:

Cyanide Management Brochures issued to local workers, hostel and township regarding cyanide information, emergency information, exposure, uses of cyanide. Verbal presentations were also given to Wedela township. Leaflets containing TSF drowning warnings, electricity warnings, and vehicle safety were also distributed. Any cyanide exposure is reported to the national Department of Mineral Resources and the Department of Water Affairs and exposure reports are available on the AngloGold Ashanti public web site. Cyanide incidents are reported in the AngloGold Ashanti

Country Report South Africa West Wits Operations
(<http://www.anglogold.co.za/NR/rdonlyres/8E6B8C1D-05C4-43E0-B63E-8CD8ACD12391/0/vaal.pdf>). An incident was reported on leak on CIL cyanide delivery line 9 Feb 2007 in AngloGold Ashanti Country Report 2007 report. No cyanide exposures, hospitalisation or fatalities occurred or were reported during the period since certification.

