Gold Mining Operations
Summary Audit Report / rev.1

for

Anglo Gold Ashanti & Kinross
Serra Grande Mining Operation(MSG)
Recertification Audit / February 2012
SUMMARY AUDIT REPORT

SUMMARY AUDIT REPORT
FOR GOLD MINING OPERATIONS

Instructions

1. The basis for the finding and/or statement of deficiencies for each Standard of Practice should be summarized in this Summary Audit Report. This should be done in a few sentences or a paragraph.

2. The name of the mine operation, lead auditor signature and date of the audit must be inserted on the bottom of each page of this Summary Audit Report. The lead auditor’s signature at the bottom of the attestation on page 3 must be certified by notarization or equivalent.

3. An operation that is in substantial compliance must submit a Corrective Action Plan with the Summary Audit Report.

4. The Summary Audit Report and Corrective Action Plan, if appropriate, must be submitted in hard copy to:

   International Cyanide Management Institute (ICMI)
   1400 I Street, NW, Suite 550, Washington, DC 20005, USA.

5. The submittal must be accompanied with 1) a letter from the owner or authorized representative which grants the ICMI permission to post the Summary Audit Report on the Code Website, and 2) a completed Auditor Credentials Form. The letter and lead auditor’s signature on the Auditor Credentials Form must be certified by notarization or equivalent.

6. Action will not be taken on certification based on the Summary Audit Report until the application form for a Code signatory and the required fees are received by ICMI from the applicable gold mining company.

7. The description of the operations should include sufficient information to describe the scope and complexity of the gold mining operation and gold recovery process.

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   Date

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Name of Mine: Mineração Serra Grande Ltd.
Name of Mine Owner: Anglo Gold Ashanti Ltd. & Kinross Gold Corporation.
Name of Mine Operator: Anglo Gold Ashanti Ltd.
Name of Responsible Manager: Ricardo de Assis Santos
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Location detail and description of operation:

The Serra Grande mining operation is located in the country side of Crixás town, located in the mid-west of Brazil. The mining activities are divided into underground and open pit mines. The description of the process is as follows:

LEACHING

The leaching area comprises 16 tanks, each one with a 202 cu.mt. capacity, plus 3 additional tanks with 400 cu.mt. each.

These tanks are provided with mechanical stirring by means of propeller-type stirrers and stirring by compressed air injection. Leaching is divided into two stages: pre-liming and cyanidation.

PRE-LIMING

This process, which takes place in tanks 1, 2 and 3, consists in preparing the slurry for cyanidation, which is initiated in tank 4.

Lime addition, already initiated during milling, is repeated in tank 2 of the leaching area. The pH is controlled at approximately 10.5 at 2 hour intervals by analyses made by a pH meter and being corrected according to the result of the analysis.

The contact time in the pre-liming stage is approximately 4 hours.
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CYANIDATION

Cyanidation takes place in tanks 4 to 19. Sodium cyanide solution is added to tank 4. Free cyanide concentration in this tank is approximately 450 ppm.

In tanks 4 to 19, the slurry is constantly stirred with the reagents. The free cyanide concentration and the pH values decrease gradually from tank to tank and are controlled in last tank at 100 ppm of free cyanide and pH~10. Oxygen dissolved in the slurry ranges from 4 to 7 mg/l and is essential for a perfect solubilization, as it participates actively in the reaction. The contact time in the cyanidation stage is approximately 24 hours.

FILTERING

The filtering circuit is divided into two stages: primary and secondary filtering.

The primary filtering circuit is fed with the cyanidated slurry from the leaching area. During the primary filtering process, the cake (solid) deposited along the cylindrical body of the filter is washed using barren solution from the precipitation and discharged, whereas the solution is absorbed into the filters. Next, the cake from the primary filtering is fed to a primary re-slurrying tank, whereas the filtrate (gold-bearing solution) is pumped to a receiving tank.

From the primary re-slurrying tank, the slurry is pumped to the secondary filters, starting the secondary filtering. As in the primary filtering, the process is repeated and two products are obtained: a gold-bearing solution (filtrated), which is pumped into a second receiving tank and the final solid waste from the process, which is fed to a secondary re-slurrying tank in which it is re-slurried to a 50% solids concentration and pumped to the Tailing Dam.

CLARIFICATION AND PRECIPITATION

The gold precipitation from the gold-bearing solution is the Merril Crowe process, which consists in clarification and de-aeration of the gold-bearing solution before the gold precipitation with zinc powder and subsequent separation of the precipitate in press filters. The gold-bearing solution from the filtering stage is fed to two hopper clarifiers, for the first clarification stage. Next, it goes through the second clarification stage, which consists of filtering through sheet filters, minimizing the amount of solid particles still present in the solution. After the clarification, the oxygen contained in the gold-bearing solution is removed by two de-aerators. The zinc powder is added to the solution by means of a dosage screw and a cone interconnected to the de-aerated solution. The obtained precipitate is sent to the smelting plant.
SMELTING

The smelting process consists basically in the collection and smelting of the precipitated and concentrated gold from the press filters and shaking tables, respectively. The smelted bullions obtained are cast into bars for shipment.

Precipitate and concentrate smelting takes place in a diesel-fired stationary furnace with capacity for 80 kg of precipitate or concentrate per smelt. At each smelt, a bullion weighing approximately 15 kg is obtained. The slag from smelting is re-melted and returns to the crushing plant.

The obtained bullions with approximately 85% of gold content are then sent to Anglogold Ashanti Mineração in Nova Lima/MG, for the refining process.

METALLURGICAL PLANT FLOW CHART

![Metallurgical Plant Flow Chart](image-url)
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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.

MSG hasn’t had any significant cyanide incidents or cyanide exposures or releases requiring notification to ICMI, since their initial certification back in 2007.

Audit Company: NOSA Certification Authority Brasil Ltda.
Audit Team Leader: Celso Sandt Pessoa
E-mail: celsopessoa@ncabrasil.com.br (ICMI qualified lead auditor and TEA)
Names and Signatures of Other Auditors: none.

Date(s) of Audit: 23/01 ~ 03/02/2012 (on-site) and 04 ~ 07/03/2012 (off-site)

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.

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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 X in full compliance with
   □ in substantial compliance with Standard of Practice 1.1
   □ not in compliance with

   Summarize the basis for this Finding Deficiencies Identified:

   The contract signed by the operation with CyPlus GmbH (AGAM 081 2007, dated 29/August/2007), clearly addresses that the solid cyanide shall be produced by a certified CyPlus facility. CyPlus has just one plant, at Wesseling/ Germany, which is currently certified by ICMI in accordance with ICMI website information. In the last four years, the operation only bought solid NaCN from CyPlus GmbH/ Wesseling, in accordance with the reviewed purchasing documentation. The contract between the operation and the producer was amended four times in these four years, but only the quantities were amended. All original requirements reviewed during the initial certification audit, remains the same. Last amendment was signed on 01/10 2010, and the contract is valid until 30/09/2013. The cyanide purchasing process is managed by the Anglo Gold Ashanti corporate purchasing process, that buys solid cyanide for all Anglo Gold operations in Brazil.

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.

   The operation is X in full compliance with
   □ in substantial compliance with Standard of Practice 2.1
   □ not in compliance with

   Summarize the basis for this Finding Deficiencies Identified:

   It was observed, reviewing the contracts and agreements among the operation and the producer (CyPlus Wesseling) and the producer with the transporter (Niquini Transportes), that general and specific responsibilities are clearly addressed on both of them.

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The solid cyanide is transported into containers, specifically designed for this purpose, fully labeled according international and Brazilian road transportation laws, and the necessary information in Portuguese. The cyanide is transported through an asphalted route, previously selected, in common agreement, by the operation, the producer and the transporter. A risk assessment of the selected route was evidenced. The transportation route can not be changed without the authorization of the operation. The cyanide is transported straight from the Santos port (Brazil) to the operation, without any kind of interim storage.

The operation established a cyanide reception procedure, in order to verify the truck condition (and maintenance) and permits, the driver permits and qualifications, the emergency responses resources (including emergency contacts) and the cyanide documentation. This procedure was evidenced to be implemented during the field audit.

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 with

☐ in substantial compliance with

☐ not in compliance with

Standard of Practice 2.2

Summarize the basis for this Finding Deficiencies Identified:

As previously mentioned, the solid cyanide is transported into the operation by ICMI certified transporters (Cyplus GmbH Germany Supply Chain # 1 (certification dated 02/06/2011, in accordance with ICMI’s website) and Niquini Transportes Ltd.(certification dated 21/12/2009, in accordance with ICMI’s website), which have specific cyanide related emergency response plans. The solid cyanide is transported straight from the Santos port to the operation, without any interim storage or changing of transporter. The solid cyanide documentation is verified in reception control at the operation, and is fully traceable to the producer, evidencing that all transport supply chain (Cyplus GmbH Germany Supply Chain # 1 and Niquini Transportes Ltd.) are ICMI certified, according to the ICMI website information.

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.

The operation is

☐ in full compliance with

☐ in substantial compliance with

☐ not in compliance with

Standard of Practice 3.1

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Summarize the basis for this Finding Deficiencies Identified: (Due to the sensitivity of security issues regarding storage of cyanide, no descriptions of substantial or non-compliance with this aspect of the Standard of Practice should be provided.)

The receiving, storage and preparation area remains the same since 2007. This area was constructed in accordance with Brazilian engineering procedures as evidenced in the first certification audit. It was evidenced that this area was adequately maintained in the last years and was found in perfect order in this opportunity.

The cyanide unloading area was constructed in a restricted area, where only authorized and qualified personnel are allowed to go in, under roof, with a drainage system, on concreted floor, and away from surface waters and people, as evidenced during the field audit.

The warehouse and preparation area are provided with HCN sensors. The unloading operation is performed by qualified operators. All the necessary safety procedures are documented in work instructions as well as the handling instructions. The operators have also portable HCN sensor during the unloading and preparation activities. The unloading, preparation and storage areas are naturally ventilated and, in the event of any cyanide leakage, these areas are concreted and the recovering of the solid cyanide is easy. The preparation and distribution tanks are inside a secondary containment. Cyanide mixing and storage tanks are equipped with overfill protection.

*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 substantial compliance with □ not in compliance with Standard of Practice 3.2

Summarize the basis for this Finding Deficiencies Identified:

The operation uses solid sodium cyanide (briquettes) which is brought to the operation in containers, specifically designated for this purpose, which is returned to the cyanide producer (CyPlus) just after the unloading activity is concluded, by the cyanide transporter (Niquini Transportes). Before departing the operation, the truck is verified to be in conformance, without any kind of leakage and completely empty and clean. The unloading activity is performed in accordance with documented work instructions, specifically developed by the operation after identifying and evaluating the risks related to the activity. The risk evaluation of the activity is performed in a structured way. The unloading operators are trained and qualified to perform that activity. Records of such trainings as well as field interviews demonstrated that the operators are prepared to perform the unloading, storage and mixing activities. The required PPEs (personal protective equipment) for the unloading, storage and mixing activities are clearly defined in the work instructions and were evidenced to be used during the field audit. The unloading, storage and mixing activities are monitored and always performed by two operators. Disposable packaging materials are sent for thermal destruction and MSG implements written procedures for unloading and mixing of reagent cyanide and for cleanup of spills that occur during these activities.

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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
☐ in substantial compliance with Standard of Practice 4.1
☐ not in compliance with

Summarize the basis for this Finding: Deficiencies Identified:

It was evidenced that the operation designed, documented, implemented and maintains a SHE management system in order to manage their SHE aspects, including cyanide. The design parameters such as freeboard, leaching flow rate, pH, CN (total cyanide) content in tailings, instrumentation alarm levels, tank alarm levels among others, are clearly addressed at the documented management and operational procedures and instructions.

The operation defined and implemented a site inspection program, performed on a daily basis, just after every shift turn, and also a comprehensive preventive maintenance program, focused on the operation installations (pumping & piping systems, tanks, ESFs (effluent storage facility) and generator back-up system. During the field audit, it was observed that these installations are in good shape and well maintained. Also observed that the plant is dry without any kind of leakage or spill.

The operation did design, document and implement a change management procedure, PTO-600-0051*, where a SHE risk evaluation is performed before the proposed configuration change be approved. Reviewed change management records, related to the replacement of the effluent treatment tanks and related to the new process (Knelson/ Acacia) installations.

The operation did develop, document and implement a specific emergency response plan considering all potential cyanide related emergency scenarios, including upset in the water balance (considering even the cessation of the operation), any deviation from design and operational criteria (e.g.: pH, freeboard, leaching solution concentration and flow, among others).

It was observed that all inspection activities are recorded, including date, shift, name of the inspector, installation being inspected, conforming/ non conforming aspects. Any non conforming aspect are recorded and communicated to the maintenance process in order to fix the identified non conformity.

Verified that corrective maintenance activities were very low during 2009, 2010 and 2011, concluding that the preventive maintenance program is effective.

Verified that the operation planned, documented and implemented a preventive maintenance program.

Reviewed preventive maintenance plan and associated records for cyanide containing equipments such as tanks, piping and pumps.

Was evidenced that the operation has two back-up generators (450kVA/ each), which are maintained and tested on a weekly basis. Reviewed maintenance and testing records of the generators.
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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
☐ not in compliance with
☐ not subject to

Standard of Practice 4.2

Summarize the basis for this Finding/Deficiencies Identified:
Although the operation does not add cyanide solution during the milling, it designed, documented and implemented a cyanide consumption management model in order to evaluate and determine the best cyanide consumption rate, in accordance with the mineral quality. The operation performs cyanidation tests (rolling bottle testing) in order to determine the best ratio between cyanide addition and gold recovery.

Since 2007, the operation updated the metallurgical study in order to confirm the ratio between cyanide consumption and gold recovery. The consumption of cyanide is decreasing since 2007, although the gold production was increased.

The cyanide consumption is monitored on a regular basis (monthly).

In the beginning of the year, the operation establishes a cyanide consumption plan where, in accordance with the mineral quality and prior tests results, the maximum cyanide consumption is defined for each month. It was observed, in all cases, that the real cyanide consumption was lower than that ones that were planned to be achieved (budget).

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
☐ not in compliance with

Standard of Practice 4.3

Summarize the basis for this Finding/Deficiencies Identified:

The operation designed and implemented a water management system. There were not any major change in this management system since the last certification audit, back in 2007. It was observed that the water management system is reviewed on a yearly basis (reviewed reports for 2009, 2010 and 2011), and all previously assumed assumptions like, storm rain, evaporation rates, rain history, water intake, water outtake, seepage and tailings deposition rate were confirmed as being correct.

The operation operates the ESF with an operational freeboard higher that that one established in the design, focusing the stability and safety of the ESF. It was evidenced that the operation installed some freeboard datum poles, divided in three different zones (green=conforming, yellow=alert, red=nonconforming), in order to optimize the visual inspection of the available freeboard. The water management system is audited by the Anglo Gold Ashanti corporate dam expert, once a year. Reviewed audit records for 2010 and 2011. Audit results confirmed that the water balance management is effective.

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The operation has a meteorological station where, on a daily basis, it monitors the rain and evaporation rates, and compares with the design assumed values. Evidenced this control since 2008. Also observed that the operation installed 15 flow-meters in order to control the water intake in the operation. This control is performed on a daily basis. The ESF is inspected on a daily basis in order to monitor the available freeboard and if there is some fauna mortality. There were no cases of fauna mortality since 2007.

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 substantial compliance with Standard of Practice 4.4
☐ not in compliance with

Summarize the basis for this Finding Deficiencies Identified:
It was observed that there is not any open water with CNw (wad cyanide) higher than 50ppm at the operation. The neutralization process of the final effluent seems to be effective, ensuring CNw < 50ppm. It was observed that the operation is fenced and the ESF is naturally fenced with original vegetation, avoiding the presence of livestock.

The operation neutralize the final process effluent with H2O2 (hydrogen peroxide) and monitor the quality of the effluent, before being discharged into the ESF. Reviewed CNw results from March 2010 until January 2012 and was observed that the highest CNw value in this period was 1.62 ppm.

There is no record of wildlife mortality since 2007. The open waters (ESF) are daily inspected and records maintained.

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

The operation is

☐ in substantial compliance with Standard of Practice 4.5
☐ not in compliance with

Summarize the basis for this Finding Deficiencies Identified:
The process effluent (after neutralization) is only released to surface waters (Das Almas Creek) if the water balance is positive (usually during the raining season). Reviewed monitoring results (final effluent, before discharge), performed by an ISO 17025 certified independent laboratory, where the typical value of CNw is < 0.05ppm.

The operation established a monitoring point, down gradient of the mixing zone, where the CNw is monitored on a daily basis. The monitoring point is included in the operation monitoring plan, which was reviewed and approved by the local EPA (Semarh Goias).

Typical value for CNw is < 0.005ppm (CNf (free cyanide) will be even lower). When CNw is higher than 0.022 ppm, the operation determines the CNf (free cyanide) content in the sample, using standard methods (the operation process laboratory is ISO 17025 certified, in accordance with the local EPA requirements).

The analytical procedures developed by the operation laboratory (ISO 17025 certified), where done in accordance with international standard methods (Standard Methods for the Examination of Water and Waste Water/2005, method SMWW-4500-CN-C-F-G).

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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 X in full compliance with  
○ in substantial compliance with  
□ not in compliance with  

Summarize the basis for this Finding Deficiencies Identified
Beyond the water management system, the operation installed piezometers down gradient of the operation in order to monitor potential seepage and also to monitor the underground water quality. It was observed, reviewing monitoring reports between 2008 and 2011, that there is no seepage. Evidenced that the values for CNt and CNw are below 0.005 ppm.
The operation monitors the underground water quality, through piezometers installed down gradient of the operation. It was evidenced, through monitoring reports, that the values of CNt and CNw are below 0.005 ppm.
The operation uses tailings (from the ESF) as underground backfill. The tailing was characterized (SGS Geosol reports SG-0090-CR/08, SG-0089-CR/08 and SG-0088-CR/08), showing that CNt is lower than 0.04 ppm (legal value established by law CONAMA 396/08 is lower than 0.07 ppm). Underground water is also monitored showing typical CNt values lower than 0.01 ppm (legal value established by law CONAMA 396/08 is lower than 0.07 ppm). In both cases, the use of tailings as underground backfill is not impacting the human health and the underground water quality.

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

The operation is X in full compliance with  
○ in substantial compliance with  
□ not in compliance with  

Summarize the basis for this Finding Deficiencies Identified
The cyanide unloading, storage, mixing and process solution tanks areas were constructed in order to prevent that any process spill could impact the human life and the environment. All these areas were observed during the field audit (engineering documentation was also reviewed) and confirmed that these areas are concreted, with secondary containments (preparation, leach and CIP tanking areas), providing a good barrier.
All secondary containments volumes are, at least, 110% greater than the biggest tank at the area. Beyond that, all secondary containment areas are provided with a pumping system and drainage system, as observed in the field audit.
Verified, during the field audit, that all cyanide process solution pipelines are provided with spill prevention systems to collect leaks and prevent releases to the environment and to prevent the human life to be impacted also.
Although there is not any cyanide containing pipelines presenting a risk to surface waters, all cyanide containing pipelines are within protected areas, with secondary containments.
All cyanide tanks and pipelines are constructed of materials compatible with cyanide and high pH conditions (carbon steel and/or HDPE).

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**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
  - □ not in compliance with

*Summarize the basis for this Finding Deficiencies Identified:

All the engineering documentation reviewed during the initial audit remains the same and are adequately maintained by the operation, as observed during the system and field audit at the hydro-metallurgy process. It was observed that during the certification period that the operation replaced two effluent treatment tanks and is implementing a new gravimetric process plant (gravity circuit optimization project → Knelson optimized + Acacia reactor). All the documentation and records, associated with these two installations were reviewed during this audit.

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

- X in full compliance with
- The operation is
  - □ in substantial compliance with
  - □ not in compliance with

*Summarize the basis for this Finding Deficiencies Identified:

It was evidenced that the operation designed documented and implemented an in depth monitoring system, focused on open waters, surface and underground waters, being in conformance with the Brazilian environmental legislation and this protocol (see SoP -+ . SoP -+ and SoP +.6).

The monitoring frequency and sampling locations were defined in accordance with the requirements defined at the environmental permit. The operation monitoring plan was reviewed and approved by the local EPA (Semarh Goiás) and it is in accordance with the operation environmental permit. In accordance with the environmental results obtained in the last years, it seems that the monitoring frequency is adequate to the operation operational circumstances. Any change in the monitoring results can be promptly detected and identified by the operation, which can respond on a timely manner.

The operation laboratory is ISO 17025 certified by the local EPA (Semarh Goiás), where analytical standards methods were adequately developed by high qualified personnel, as well as sampling procedures, sampling preservation methods, custody procedures, among other aspects, as evidenced in the system and field audit at the operation environmental laboratory. No cases of wildlife fatalities were observed at the operation since 2007.

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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

Summarize the basis for this Finding Deficiencies Identified:
The operation developed, documented and implemented a management procedure focused on the management of the closure activities (decommissioning + restoration activities) of the operation. It was evidenced that the operation updated the operation decommissioning and closure plan, which was developed by Golder Associates (report RT-005-109-525-2003-01-J, dated September 2011). This updated decommissioning and closure plan was reviewed during this audit. The decommissioning and closure plan clearly describe the schedule to be followed during the decommissioning and closure activities, including activities (environmental monitoring) that shall be performed after the operation closure. The operation is planned to be closed-out on 2017. Also reviewed a specific closure schedule (detailed), dated 20.09.2011, produced by the Corporate Environmental Coordination Process, based on the decommissioning and closure plan. In accordance with internal management procedures, the decommissioning and closure plan shall be reviewed and updated every three years. Reviewed plan was updated in September 2011.

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

Summarize the basis for this Finding Deficiencies Identified:
The Golder Associates report RT-005-109-525-2003-01-J, dated September 2011, identify the required costs related to the implementation of the plan by a third party. The total amount was included in the “reclamation cost report” (dated 21.10.2011), which is annually updated. Reviewed values since 2009.
The operation updates annually the costs related to the implementation of the decommissioning and closure plan. Reviewed reclamation cost reports from 2009, 2010 and 2011 (last updated on 21/10/2011). The Brazilian Mining Legislation does not demand or establish any financial mechanism to be followed by the operation. The operation implemented a self-guarantee mechanism. Beyond this mechanism, the operation has also insurance certificates related to the operational risks.

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Annually the operation has its financial health audited by independent third party auditors. The last financial audit was performed by Ernst, Young & Terry, a legally established financial auditing company in Brazil (permit CRC-2SP015199/O-6-F-MG). Last financial audit was related to the financial year ended 31/12/2010 and was led by Mr. Flavio de Aquino Machado, a qualified financial auditor (permit CRC/MG-065899/0-2). The financial audit was carried out in accordance with International Financial Report Standards (IFRS), which are acceptable either in Brazil and internationally. The financial audit report clearly states that the operation has enough financial health to fund the implementation of the closure plan. The financial audit report was published at the DOU: GO (it is a Brazilian Government daily newspaper, specific for the Goias State, where the plant is located. This DOU is available for public consultation) and also at the local newspaper “O Popular”. It was also distributed to external stakeholders such as banks and the Brazilian Public Financial authorities. It is also available at www.anglogoldashanti.com, for public consultation.

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
☐ in substantial compliance with Standard of Practice 6.1
☐ not in compliance with

Summarize the basis for this Finding Deficiencies Identified:

The operation identified and evaluated all the SHE risks associated with the cyanide and, in order to have the risks under control and mitigated, the operation defined, documented and implemented specific operational procedures for cyanide related activities. The risk identification and evaluation process is performed in a structured way and involves different stakeholders.

The operation developed and implemented a documented change management procedure where all the risks related to the proposed change and impacting on health, safety and environment, are identified and evaluated by a multi-disciplinary team, before the proposed change be accepted.

The development of work instructions are performed in conjunction by these stakeholders (operators, supervisors, managers and SHE professionals). The required PPEs for each activity (unloading, leaching, maintenance, neutralization, confined spaces) are defined and addressed in the documented work instructions. In order to maintain the risk evaluation updated and, in consequence, the work instructions, the operations established a procedure to update them if any circumstance has changed or, at least, every two years. This procedure is part of the annual refreshing program for supervisors and operators.
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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

☐ not in compliance with

Standard of Practice 6.2

Summarize the basis for this Finding
Deficiencies Identified:

The operation determined that the minimum pH value shall be equal or greater than 10.5. The pH is effectively controlled and monitored (through calibrated pH meter) in the operation. Alarm systems are in place. Verified, during the field audit, that the usual pH value is around 12. The pH is controlled through the addition of caustic soda. The operation has fixed calibrated HCN detectors in the cyanide preparation tank area and the operators also use portable calibrated HCN detectors. Both cases evidenced in the field audit. The fixed and portable HCN detectors are maintained and calibrated in accordance with a calibration management system. Reviewed calibration records of all HCN detectors. It was evidenced during the field audit, that the operation premises (cyanide circuit) are richly signed, including the prohibition of drinking, eating and smoking in these areas. Auxiliary emergency installations/ equipments such as low pressure eye-washers and showers, fire extinguishers, were evidenced in the operation premises. Some of these auxiliary installations were tested during the audit and worked well.

Also observed that the operation implemented a fire extinguisher (CO2 and dry powder) management system, in order to maintain these auxiliary equipments under good operational condition. It was evidenced during the field audit, that the operation installations (tanks, piping, valves, pumps, pools) are in good shape, the tanks and piping are adequately painted and signed, in accordance with a color code outdoor, available at the process plant. Beyond that, all operators are aware that all installations having a purple painting on it, it contains cyanide.

The cyanide flow identified. Cyanide MSDS is also available (in Portuguese) in the plant. It was evidenced that the operation has defined and implemented procedures to evaluate SHE incidents.

No cyanide related incident occurred in the plant, during the last three years, confirming that the cyanide management is effective.

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

The operation is

- X in full compliance with Standard of Practice 6.3
- ☐ in substantial compliance with Standard of Practice 6.3
- ☐ not in compliance with

Summarize the basis for this Finding Deficiencies Identified:
The operation has developed emergency procedures for that activities at the leaching plant and has an emergency care center (with medical assistance 24th per day), fully equipped with a resuscitator, one ambulance, antidote kits, telephone, radio, oxygen cylinders. These facilities were evidenced in the field audit. All the first aid equipments are effectively inspected by the local nurses, including the ambulance (which is ready to be used and was tested during the audit). Evidenced the inspection records. The antidotes are stored under controlled conditions, into a refrigerator and their validity is constantly checked. The operation qualified the local hospital (Hospital Regional de Crisá) as a complementary resource in the event of cyanide related emergencies. The transportation procedures between the operation and the local hospital are tested. It was evidenced that cyanide related emergency drills are effectively performed by the operation, including and involving the local Hospital team in the exercises. Evidenced 2011 annual emergency simulation plan and related drills records.

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

- X in full compliance with Standard of Practice 7.1
- ☐ in substantial compliance with Standard of Practice 7.1
- ☐ not in compliance with

Summarize the basis for this Finding Deficiencies Identified:
The operation defined, documented and implemented procedures to respond to cyanide related emergencies. Evidenced a specific cyanide response plan, encompassing cyanide emergency scenarios related to transport, unloading and operations. The plan clearly addresses the required resources, PPEs, communication channels and telephones (including the CyPlus ones) as well as the specific procedures for each identified scenario (in accordance with ICMI protocol). Cyanide related emergencies responses during external transportation to the operation are covered by the plan, shared with the NaCN producer (CyPlus) and NaCN transporter (Niquini), both ICMI certified, and the operation, that will have a support role in this scenario. The internal NaCN transportation is also covered by this emergency plan.
The emergency plans clearly addresses specific responses to that situations, considering internal and external stakeholders.

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

- X in full compliance with
- □ in substantial compliance with
- □ not in compliance with

Summary of the basis for this Finding Deficiencies Identified:
The emergency response plans were reviewed, approved and communicated to several stakeholders (internal and external), including security and health authorities (local hospital), public authorities, emergency response suppliers (SOS Cotec emergency responder), community representatives. Before a training exercise (mock drill), the plan that will be simulated is discussed, again, with all the parties (internal and external) that will participate in the training exercise.

It was evidenced the meeting record (dated 06-10-2011) involving several stakeholders that would participate in the integrated simulation exercise involving an emergency during the cyanide transportation impacting a surface water.

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

- X in full compliance with
- □ in substantial compliance with
- □ not in compliance with

Summary of the basis for this Finding Deficiencies Identified:
The operation defined, documented and implemented procedures to respond to cyanide related emergencies. Reviewed a specific cyanide related emergency plan and the CyPlus emergency plan. Responsibilities and authorities are clearly defined and communicated to all involved stakeholders (internal and external). The emergency response brigade members are voluntary and passed through a selection process (medical, theoretical and practical), to be assigned as a brigade member. The brigade members were trained and qualified before being assigned as emergency brigade members. The emergency committee organizational flowchart was also evidenced, as well as the emergency communication loop. The emergency brigade master list addresses all the necessary information about the brigade members, including contact details of internal and external stakeholders.

The emergency response plans (internal and the CyPlus one) identify the required resources (hardware) that are necessary to each situation. The basic emergency response hardware is consisted of one ambulance (completely equipped, daily tested and ready to be used), auxiliary equipment (PPEs) for the brigade members, such as chemical/flame resistant overall, chemical gloves, oxygen masks and cylinders, chemical masks. The CyPlus emergency plan covers that situations outside the operation (during transportation), in conjunction with Niquini Transportes, both ICMI certified.

The emergency response hardware is monthly inspected by the safety and health officers of the operation. The ambulance is daily inspected and tested. Records of such inspections were evidenced and found in place.

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

X in full compliance with

☐ in substantial compliance with Standard of Practice 7.4
☐ not in compliance with

Summarize the basis for this Finding Deficiencies Identified:

The emergency response plan was reviewed, approved and communicated to several stakeholders (internal and external), including security and health authorities, public authorities, emergency response suppliers, community representatives. When performing emergency drills, the operation invites specific stakeholders to participate in the drills. Another implemented control is to perform periodic meetings with stakeholders, in order to discuss and updated (if necessary) the emergency response plan. The emergency communication loop is clearly defined and also contact information is available in the plan. Communication procedures with external media were found in place.

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

☐ in substantial compliance with Standard of Practice 7.5
☐ not in compliance with

Summarize the basis for this Finding Deficiencies Identified:

The operation defined, documented and implemented procedures to respond to cyanide related emergencies. Reviewed a specific cyanide emergency plan and the CyPlus emergency plan linked with cyanide transportation. Responsibilities and authorities are clearly defined and communicated to all involved stakeholders (internal and external). The emergency committee organizational flowchart was also evidenced. Solid briquettes are recovered with the aid of cleaning devices and disposed into plastic bags (returned to plant and disposed into cyanide solution tanks). The soil shall be neutralized with the aid of specific chemicals products such as nitrogen peroxide solution. Cyanide solutions are recovered with the aid of specific pumps and returned to the leaching process tanks. Neutralized soil is removed and disposed into plastic bags, returned to the plant and then forwarded to final disposal a certified and licensed (by the local EPA) contractor, which will process the solid waste, on an environmentally acceptable way. Open or surface waters are monitored and no chemical products are allowed to neutralize the open/ surface water.

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The operation has the responsibility (shared with the public authorities) to manage and provide drinking water to the affected stakeholders, in the event of any cyanide related emergencies into water supply resources (rivers). The operation will provide mineral water in bottles and also will distribute, using tank trucks, water for general purposes obtained at underground shafts.

The plan clearly defines the required monitoring procedures to be implemented in the event of soil and water potential contamination. An environmental monitoring plan is addressed at the emergency response plan.

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

The operation is [X] in full compliance with
[ ] in substantial compliance with Standard of Practice 7.6
[ ] not in compliance with

Summarize the basis for this Finding: Deficiencies Identified:

The operation defined, documented and implemented procedures to respond to cyanide related emergencies. Reviewed a specific cyanide emergency plans and the CyPlus emergency plan.

The MSG emergency response plan was reviewed, approved and communicated to several stakeholders (internal and external), including security and health authorities, public authorities, emergency response suppliers, community representatives. When performing emergency drills, the operation invites specific stakeholders to participate in the drills. Another implemented control is to perform periodic meetings with stakeholders, in order to discuss and updated (if necessary) the emergency response plan. The emergency communication loop is clearly defined and also contact information is available in the plan.

The plan is, at least, reviewed every two years (or before, depending on the results of the simulation exercises).

Evidenced the 2010 and 2011 Annual Emergency Drill plan. Evidenced four emergency drills performed since 2010, involving NaCN intoxication during leaching process, NaCN transportation (in conjunction with CyPlus and Niquini Transportes), HCN intoxication during cyanide solution preparation and ESF related emergency.

After each emergency drill, the drill results are reviewed and discussed among the participants. The opportunities of improvement raise-up during the drill are considered as corrective or preventive actions and managed adequately. Reports related to the drills and their review were found in place.

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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.

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**Summarize the basis for this Finding Deficiencies Identified:**

The operation did design, document and implement an introductory training program which is applied to all new employees and contractors coming to work in the operation. This introductory training program scope is focused on general aspects of sodium cyanide, cyanide related risks, emergency situations related to cyanide and first aid procedures related to cyanide exposures.

The operation implemented a refresh training program, which is applied for all employees and contractors every three years. The content of the cyanide refresh training program is the same one of the introductory training.

Both introductory training program and refresh training program records are kept by the operation. Reviewed records related to introductory training and refresh training performed between 2009 and 2011.

The training record is an assistance list with the date, instructor name, attendees name and signatures, training content and general perception about the attendees, made by the instructor. During the field audit, it was evidenced that the employees are aware about the cyanide related risks.

**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.

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**Summarize the basis for this Finding Deficiencies Identified:**

After the introductory training, all employees that will work directly with cyanide (operators, laboratory technicians, maintenance technicians, drivers) will pass through an “on the job training” which consists basically on the training in operational procedures and emergency procedures (40 hours). These operational training is provided by the operation supervisors and process engineers. After the on the job training, the employees will work under supervision during 45 days. After that, the employee is qualified (or not) to work alone.

The operational on the job training consists basically on the operational and emergency procedures. The training is divided in theory and practice. All the operational aspects are clearly identified in the training materials. Reviewed on the job training program for plant operators, plant maintenance technicians and laboratory technicians.
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Operational training is provided by supervisors and process engineers, during 40 hours. The on the job training is divided in several topics (depending on the function). Only after the trainee is approved in a specific topic, he is allowed to move forward to another topic. After 40 hours of operational training (theory and practice), the trainee will work, during 45 days, under supervision. In the ending of this period, the trainee is qualified (or not) to work in the operation. Records of such operational on the job training are kept by the operation.

All employees that works directly with cyanide are recycled in cyanide management every three years (refresh training program). Beyond this program, annually the cyanide producer (Cyplus GmbH) also provides general cyanide training to the plant operators and supervisors, laboratory technicians and maintenance employees.

The operation verifies the effectiveness of the provided training (refresh one too) through testing and planned job observations. Records of refresh trainings, tests and job observations are maintained.

**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
☐ in substantial compliance with  ☐ not in compliance with

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**Summarize the basis for this Finding:**

All the plant personnel were trained in cyanide related emergencies. Annually, the employees are retrained (refresh) in these procedures. Last refresh training was carried out on October 28th, 2011. Records of such training were evidenced.

The emergency response brigade members are voluntary and passed through a selection process (medical, theoretical and practical), to be assigned as a brigade member. The brigade members were trained and qualified before being assigned as emergency brigade members. Decontamination and first aid procedures are included in the emergency training scope.

All members were trained in the emergency procedure. Last performed training was during November 2011. Before the emergency simulation exercises, the emergency plan that will be simulated is again reviewed and discussed among the participants. Records of such briefing meetings were reviewed.

As previously mentioned (see Principle 7), the operation planned and implemented an emergency response exercise calendar. The performance of the emergency responders are observed and reported. In the event of any identified opportunity of improvement, corrective and/or preventive actions are defined and implemented, including the revision of the emergency plan.

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

The operation is

- [X] in full compliance with
- [ ] in substantial compliance with
- [ ] not in compliance with

Standard of Practice 9.1

Summarize the basis for this Finding Deficiencies Identified:
The operation provide the opportunity for stakeholders to communicate issues of concern regarding the management of cyanide through a direct telephone line (0800 7271500). This telephone line is communicated to the stakeholders through newspaper, radio advertisement, leaflets and magnets distributed during specific and programmed meetings with stakeholders.

All callings are recorded by the operation. It was evidenced that this communication channel is used by the stakeholders, but none of the reviewed records was related to cyanide concerns. The operation also designed and implemented a communication program with all the communities potentially affected by the operation aspects, based on specific and planned meetings. This program is called “Boa Vizinhança (Good Neighborhood)”, where the operation and communities representatives discuss several matters, such as environmental monitoring results, cyanide management, among others subjects. Records of such meetings are maintained by the operation and were reviewed during the audit. These meetings happen quarterly.

Stakeholders also can communicate with the operation through specific email address (ARPublicas@anglogoldashanti.com.br) which is communicated to the public (internal and external) through the corporate newspaper “Nosso Ouro (for internal stakeholders)” and “Momento (for external stakeholders)”. These two newspapers are directly mailed to the stakeholders, every two months.

Another opportunity to internal stakeholders to communicate points of concerns related to cyanide management is through the daily safety dialogues and also through email.

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

The operation is

- [X] in full compliance with
- [ ] in substantial compliance with
- [ ] not in compliance with

Standard of Practice 9.2

Summarize the basis for this Finding Deficiencies Identified:
The operation implemented and maintains communication channels with stakeholders (internal & external) in order to dialogue with them. The “boa vizinhança” program is consisted by programmed meetings (quarterly) with the community representatives, were several matters are discussed. Another program is related to the environmental monitoring with the representatives of surrounding communities. Monitoring results (surface waters and air quality) are documented and communicated in the meetings with the community (boa vizinhança). The operation also distribute, every two months, specifically designed newspapers for external stakeholders (Momento) and internal stakeholders (Nosso Ouro). On a weekly basis, the operation releases an internal bulletin (Realce), that is distribute for internal stakeholders (employees by email and hardcopy and contractors only by hardcopies, which is available at the operation main entrance). The operation contact information is available in all these types of media.

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Another opportunity to dialogue with stakeholders is through programmed meetings. Records of such meetings are kept by the operation. Unplanned meetings with public authorities are also used by the operation to dialogue with external stakeholders. Finally, the operation training programs, focused on cyanide management, are also used to dialogue with internal stakeholders (employees and contractors).

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

- X in full compliance with
- □ in substantial compliance with
- □ not in compliance with

**Summarize the basis for this Finding Deficiencies Identified:**

The operation designed, documented and distributed specific booklets describing how the cyanide is managed and relevant information related to cyanide emergencies. This booklet is available for everybody. The newspaper “Nosso Ouro” and “Momento”, also addresses, on a regular basis, relevant information related to cyanide management, since the production until the destruction of the cyanide. All environmental monitoring results (surface waters and air quality) are documented in booklets and distributed to the communities representatives and also to public authorities (quarterly reports).

Although the local population, in most of the cases, is not illiterate, the operation disseminated, in verbal or visual form, information related to cyanide management at the operation (meetings with community representatives). Environmental monitoring results are followed by color signals were green is conforming, yellow is alert and red is non-conforming.

As previously mentioned, there were not any cyanide related incident at the operation or during the transportation. In the event of any type of incident, the operation implemented several communication channels, in order to attend public consultation.

The following contact information is available to the general public:

- 0800-7271500 (corporate communication)
- Email: ARPublicacao@anglogoldashanti.com.br (corporate communication).

The operation will also communicate cyanide exposures and releases to local labor agency (DRT/ GO) and environmental agency (Semarh Goiás).

The operation will also make information related to cyanide incidents public, through the corporate communication process, through press releases. It was evidenced that the corporate communication process documented and implemented communication procedures with the media (newspaper and television). These communication procedures are exercised (simulation drills), at least, once a year. Records of communication drill performed on April 2011 were evidenced.