
# *Gold Mining Operations*

# *Summary Audit Report*

# *for*

# *Minera El Peñon Ltd/*

# *Yamana Gold Group.*

# *2010/ 2011*

**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, with all required signatures must be submitted in hard copy to:

**International Cyanide Management Institute (ICMI)**
**888 16th Street, NW, Suite 303**
**Washington, DC 20006, 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.

# SUMMARY AUDIT REPORT

Name of Mine: Minera El Peñon Ltda.
Name of Mine Owner: Yamana Gold Inc.
Name of Mine Operator: Minera El Peñon Ltda.
Name of Responsible Manager: Ricardo Solovera
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State/Province: Antofagasta Country: Chile
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Location detail and description of operation:

Minera El Peñon is located 150 km east of the town of Antofagasta, Antofagasta Province, Chile's Region II. Access to the project area is through an asphalted road from Antofagasta to the operation. At the milestone Km 105 of this main route there is a secondary asphalted route straight to the operation. The operation may also be accessed through an un-asphalted road that connects with the Ruta 5 North km. 1258, about 150 km. southeast of Antofagasta town.
El Peñon operation is a gold mine of high grade veins. The operation is carried out in underground mine by mining method called cut and fill and through open pits and now the latter method is not operating, maintaining enclosures and pits out of operation. It is possible to define two operational areas: El Peñon area, where facilities (processing/leaching plant), open pits (not being exploited) and underground mine are located and the Fortuna area, which corresponds to a section of underground mine and is located 10 km from the El Peñon area. Gold recovery is by a leaching process by shaking with sodium cyanide. Getting gold from pregnant solution is accomplished by precipitation with zinc smelting and refining furnace. See process flow-sheet.

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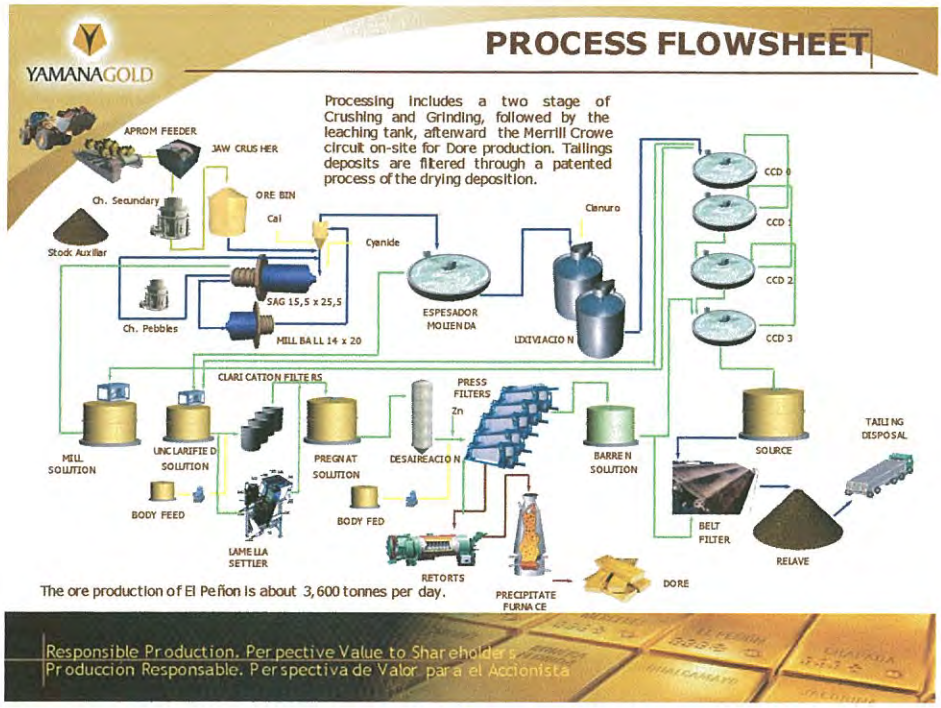


Minera El Peñon — Name of Mine

Signature of Lead Auditor

10/01/2012 — Date

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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.

Audit Company: NOSA Certification Authority Brasil Ltda.
Audit Team Leader: Celso Sandt Pessoa
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Acting lead auditor: Eberson Cassio de Andrade
E-mail: ebersoncassio@nosa.com.br (ICMI qualified lead auditor and TEA)
Names and Signatures of Other Auditors:
Celso Sandt Pessoa (ICMI qualified lead auditor and TEA).

Date(s) of Audit: 11 ~ 15/10/2010 (on-site)/ 20 ~ 22/12/2010 (on-site) and 23 ~ 25/04/2011 (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.*

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| The operation is | **X** in full compliance with<br>☐ in substantial compliance with<br>☐ not in compliance with | Standard of Practice 1.1 |

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

A contract draft was presented and mentions that cyanide must be purchased from manufacturers certified under the Code; requires that the transporter must be certified under the Code. The contract is to be formalized and the purchase of cyanide is performed by "purchase order". The solid cyanide is produced by DuPont facility at Memphis/TN/ USA, which is certified according to the information available at the ICMI website. Cyanide is not purchased from an independent distributor.

***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.*

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| The operation is | **X** in full compliance with<br>☐ in substantial compliance with<br>☐ not in compliance with | Standard of Practice 2.1 |

*Summarize the basis for this Finding/Deficiencies Identified:*
The contract between El Peñon and DuPont establishes in its article 6 the responsibilities for safety, security, release prevention, training and emergency response and DuPont's responsibility over the entire production and transportation process, contracted by El Peñon to ensure that the transporter will be in compliance with the Code.

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

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| The operation is | **X** in full compliance with<br>☐ in substantial compliance with<br>☐ not in compliance with | Standard of Practice 2.2 |

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

There is no contract between El Peñon and the transporter Verasay. Dupont is responsible for delivering the cyanide inside El Peñon. The contract between El Peñon and Dupont establishes that Dupont must use transporters certified under the Code. The company responsible for transporting cyanide is "Transportes Verasay Ltda" and was audited from July 23 to 26, 2010 and posted in the ICMI website as full compliance. Chain of custody records identifying all elements of the supply chain were available to the auditor. The entire chain of custody is certified.

***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.*

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| The operation is | **X** in full compliance with<br>☐ in substantial compliance with<br>☐ not in compliance with | Standard of Practice 3.1 |

*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.)**

Facilities for unloading, storing and mixing cyanide have been designed and constructed in accordance with applicable jurisdictional rules and accepted engineering practices for these facilities. The Penetron certificate (that is a document to make El Peñon aware regarding the quality and the assurance of the impermeabilization process) was checked (impermeablilizer) as well as leakage test records for all metallurgical plant areas (Informe Técnico Aplicación Penetron Planta Minera Meridian N12), like thickeners, leaching tanks, filters, ball mill, SAG mill, floculation tank and cyanide mixing tank. No liquid cyanide is used. An automatic level control system was presented, and for the cyanide mixing and storing tanks it is linked to a valve control and pump speed setting. Emergency containments have also sensors and alarm for high level displayed at the control room. The Penetron certificate was checked (impermeablilizer) as well as leakage test records for all metallurgical plant areas (Informe Técnico Aplicación Penetron Planta Minera Meridian N12), like thickeners, leaching tanks, filters, ball mill, SAG mill, floculation tank and cyanide mixing tank. The containments are connected by gravity to an emergency containment with capacity to hold the total

volume of metallurgical plant tanks plus 20%. The study was evidenced (1048-PR-NT-01). Cyanide warehouse is isolated by fences, allowing adequate air circulation, has a roof and it off the ground. It is stored within a fenced boundary, separate from incompatible materials and apart from foods. There is no animal or tobacco products in the site.

*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.*

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| The operation is | **X** in full compliance with<br>☐ in substantial compliance with<br>☐ not in compliance with | Standard of Practice 3.2 |

*Summarize the basis for this Finding/Deficiencies Identified:*
The procedure P-PO-013 "Procedimiento para La Preparacion de Cianuro de Sódio" prohibits the use of empty cyanide containers from any other purpose. The procedure P-PO-013 rev01 "Procedimiento Para La Manipulación de Cianuro de Sódio" establishes that cyanide bags must be rinsed three times before being transported to the empty containers disposal warehouse. There is a procedure "Muestreo Sacos de Cianuro – SGA-GP-I-030 rev0" to check the efficiency of triple washing. An implementation study for the triple washing with records of metallurgical tests was audited, including decontamination and setting of an automatic system (PLC) for triple washing using alkaline solution of sodium hidroxide (approximately 0,0495g/liter). There are procedures for handling "Retiro y Manejo de Cajones de Cianuro" MA-MR-006 rev02 and loading and unloading of containers "Procedimiento de Trabajo Carga y Descarga de Tambores y Cajas de Cianuro". It was also checked a disposal report "Informe Disposicion de Cajas en Hidronor" and the records "Registros de Envio SIDREP"(Hazardous Tailing Report System -a Chilean audit organization), the disposal reports "Certificados de Recepcion y Tratamiento" #2396, 2446, 2718 from company HIDRONOR. The procedure "C-PO-002 Recepción y Descarga de Cianuro de Sodio Rev 05 ", requires at item 6.3 the immediate cleanup and enclosure of cyanide residue. The procedure that defines how to prepare cyanide in a safe way is "P-PO-013 Procedimiento para la Manipulacion de cianuro de sodio". The safe handling of cyanide containers is described in the procedures for delivery, unloading and mixing of cyanide solution "C-PO-002 Recepción y Descarga de cianuro de sodio" and "P-PO-013 Procedimiento para la Manipulación de cianuro de sodio". Limiting the height of stacking of cyanide containers is described in the procedure "C-PO-002 -item 6.2.2". Timely clean up of any spills of cyanide during mixing is described in the procedure "P-PO-013 Procedimiento para la Manipulación de cianuro de sodio - item 6.2."

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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.*

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| The operation is | **X** in full compliance with<br>☐ in substantial compliance with<br>☐ not in compliance with | Standard of Practice 4.1 |

*Summarize the basis for this Finding/Deficiencies Identified:*
The operation did design, documented and implemented operational and management related to cyanide involving activities such as receiving, storing, handling, mixing, sampling, monitoring, inspecting, emergencies and maintenance. Design parameters, when applicable, were addressed in the documented procedures. Also evidenced that the operation did implement a change management procedure (tanking area overhauling process).The operation defined and implemented a water balance management procedure which includes the emergency measures that shall be taken during potential water balance problems. Was evidenced that the water balance at the operation is under effective management (see SoP 4.2). Was evidenced that the operation did design, documented and implemented an inspection system, focused on the cyanide containing installations. The frequency of the inspections is linked with the preventive maintenance program, that was also implemented by the operation. Planning and execution records related to the performed inspections and preventive maintenance are kept by the operation and were reviewed during the audit. During the field audit, was evidenced that, in general terms, the plant area is dry. Was evidenced that the operation has sufficient energy back-up, provided by diesel generators, that were included in the preventive maintenance program and frequently tested. Records of such activities were reviewed.

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

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| The operation is | **X** in full compliance with<br>☐ in substantial compliance with<br>☐ not in compliance with<br>☐ not subject to | Standard of Practice 4.2 |

*Summarize the basis for this Finding/Deficiencies Identified:*
Was evidenced that the operation did develop and implant a system to manage the cyanide consumption at the process plant. With three months in advance, the operation laboratory evaluates, based on the different ore types, the best cyanide content that shall be used by the process plant, in order to ensure the best Au/Ag recovery. The cyanide consumption in the operation is decreasing, as evidenced through the testing and operational records.

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

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| The operation is | **X** in full compliance with<br>☐ in substantial compliance with<br>☐ not in compliance with | Standard of Practice 4.3 |

*Summarize the basis for this Finding/Deficiencies Identified:*
Was evidenced that the operation did design, document and implemented a water balance management procedure. The audited operation is located in the middle of the Atacama desert, a very dry place, where the available fresh water amount is very low (no rivers or lakes in the surroundings). The fresh water used in the operation is captured at a point 20Km far from the operation, in a depth of 200 meters. Rain is not usual (below 10mm/y) but was considered in the water balance, among others aspects such as fresh water intake, evaporation rates, potential process leakages. Evaporation rate is very high. The rain history (last 100 years) of the zone revealed that the precipitation mean value is close to zero mm/year. Evidenced, during the field audit, that the operation stores fresh water in specific designed tanks. All fresh water tanks are located outside the plant, at a small hill. The operation implemented an inspection system (see SoP 4.1), focused on the two emergency pools (always empty) and the plant installations (primary and secondary containments). Every shift turn, a general inspection is also performed, in order to detect any leakage. The operation does not have a tailings dam. Was evidenced that the water balance management system is implemented and seems to be effective.

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

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| The operation is | **X** in full compliance with<br>☐ in substantial compliance with<br>☐ not in compliance with | Standard of Practice 4.4 |

*Summarize the basis for this Finding/Deficiencies Identified:*
As previously mentioned, the operation is the middle of a desert zone, without flora, fauna and livestock (as stated in the initial environmental impact study, performed by a local University and approved by the local EPA (Environmental Protection Agency)). Anyway, the process plant (including the two emergency pools), are inside a fenced area, where only authorized personnel are allowed to go inside it. The operation uses the tanking leaching process. After the filtering process, the resulting tailings, a little bit wet, are transported and disposed at a specifically designed brown field, to dry. The drying process is concluded in less than 24 hours, due to the high evaporation rate present in the operation and also through the action of the sun. The operation installed several piezometers, down gradient of the brown field, in order to monitor the effectiveness of the drying process and also to ensure that there is no seepage impacting the underground soil. The reviewed monitoring records showed that all piezometers are dry, confirming that the drying process is effective.

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

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| The operation is | **X** in full compliance with<br>☐ in substantial compliance with<br>☐ not in compliance with | Standard of Practice 4.5 |

*Summarize the basis for this Finding/Deficiencies Identified:*
As previously mentioned, the operation is located in the Atacama desert (the driest in the world). There are not any surface waters (rivers, lakes, ponds) that could be impacted by the operation's aspects. The operation does not have a tailings dam. The low wet solid tailing is dried at a specific designed area for this purpose (see SoP 4.4). The evaporation rate is very high and the sun shines the whole year. The operation did install six monitoring points, down gradient of this area, in order to verify the effectiveness of the drying process and any potential contamination of the underground area (see SoP 4.6).

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

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| The operation is | **X** in full compliance with<br>☐ in substantial compliance with<br>☐ not in compliance with | Standard of Practice 4.6 |

*Summarize the basis for this Finding/Deficiencies Identified:*
As previously mentioned, the operation captures the fresh water necessary to its operations far from the operation. There are not any underground water that could be impacted by the operation's aspects. Anyway, the operation implanted six monitoring points, in a depth varying from 60 to 200 meters, down gradient of the drying area, in order to verify the effectiveness of the drying process (natural evaporation plus sun destruction). Results evidenced that there are not any impact in the underground soil.

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

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| The operation is | **X** in full compliance with<br>☐ in substantial compliance with<br>☐ not in compliance with | Standard of Practice 4.7 |

*Summarize the basis for this Finding/Deficiencies Identified:*
Evidenced that the plant process area (storage, tanking and piping), was constructed on a concreted floor. Primary and secondary containment systems, connected by drainage channels (and a pumping system) were also evidenced in the field audit. It is a closed process water loop. Overhead piping that could impact on the workers safety have a secondary containment. All tanks and pipes were constructed with carbon steel. Emergency pools were constructed with HDPE.

*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.*

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| The operation is | **X** in full compliance with<br>☐ in substantial compliance with<br>☐ not in compliance with | Standard of Practice 4.8 |

*Summarize the basis for this Finding/Deficiencies Identified:*
Evidenced that the operation was designed, constructed and commissioned in accordance with acceptable engineering standards. As built and quality controls records were kept by the operation and reviewed during the audit. The solid cyanide warehouse was constructed in accordance with an approved design (concreted floor, under roof, well ventilated and fenced).
The cyanide tanks were overhauled by a Chilean engineering company and certified in accordance with API 653 standard. All certificates were reviewed during the assessment as well as all the testing reports (UT+PT) provided by the company.

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

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| The operation is | **X** in full compliance with<br>☐ in substantial compliance with<br>☐ not in compliance with | Standard of Practice 4.9 |

*Summarize the basis for this Finding/Deficiencies Identified:*
The operation did design, documented and implemented an extensive environmental monitoring system, focused on the fresh water, mine water (when available) and underground down gradient of the drying area. All monitoring are performed by an ISO 17025 certified laboratory. The frequency of the monitoring activities was defined in accordance with the Chilean law and the operation environmental permit. The environmental monitoring program and associated records were reviewed. Results showed no impacts in the environment.

## *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.*

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| The operation is | **X** in full compliance with<br>☐ in substantial compliance with<br>☐ not in compliance with | Standard of Practice 5.1 |

*Summarize the basis for this Finding/Deficiencies Identified:*
It was evidenced that the operation designed, documented and implemented a decommissioning management procedure focusing the closure planning of the operation (and its update), including cyanide installations decontamination, dismantling and disposal of them. The costs related to that activities were estimated and projected to the future activities. These costs are annually updated and the closure plan also annually reviewed (updated if the circumstances changes). The schedule to implement the closure plan was reviewed and it includes also monitoring activities after the operation closure. Partial decommissioning activities are covered and forecasted by the mentioned closure plan.

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

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| The operation is | **X** in full compliance with<br>☐ in substantial compliance with<br>☐ not in compliance with | Standard of Practice 5.2 |

*Summarize the basis for this Finding/Deficiencies Identified:*
Was evidenced that the operation forecasted the expenses related to the implementation of the decommissioning and closure plan (total and partial). The required amount was included in the corporation budget and annually updated. The corporation was audited by an independent third part auditor (qualified auditor by the State of Colorado/ USA), which used USA acceptable financial audit methods (GAAP). Audit report is available (Delloite Auditors Corporate Financial Report 2010), for public consulting, at the company's website (www.yamana.com/financial results) and was reviewed during the audit. The audit result showed that the operation has enough financial health to implement the decommissioning plan.

## *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.*

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| The operation is | **X** in full compliance with<br>☐ in substantial compliance with<br>☐ not in compliance with | Standard of Practice 6.1 |

*Summarize the basis for this Finding/Deficiencies Identified:*
El Peñon has developed procedures for delivery "*C-PO-002 Recepción y Descarga de Cianuro de Sodio Rev 05*" and mixing of cyanide solution "*P-PO-013 Procedimiento para la manipulación de cianuro de sodio*" decontamination previous to maintenance "*P-PO-002 Descontaminación de equipos*", sampling of bags "muestreo sacos de cianuro" SGA-GP-I-030 rev1, which establishes analysis of decontamination of cyanide bags monthly, to evaluate the effectiveness of three-washing process. There is a procedure for working at confined areas. The procedures for delivery and mixing of cyanide solution decontamination previous to maintenance consider PPE and requires inspections to be performed previous to work and that PPE used during the mixing must be stored in a safe area built for this purpose. El Peñon implemented procedures to review proposed process and operational changes and modifications for their potential impacts on worker health and safety, and incorporate the necessary worker protection measures, as observed during the audit. The operation presented records of plant operators, supervisors and contractors participating in cyanide risk assessment and developing procedures.

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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.*

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| The operation is | **X** in full compliance with<br>☐ in substantial compliance with<br>☐ not in compliance with | Standard of Practice 6.2 |

*Summarize the basis for this Finding/Deficiencies Identified:*
The operation has established a minimum pH of10,5 at the procedure "P-PO-013 Procedimiento para la manipulación de cianuro de sodio". A procedure defines areas where monitoring must be implemented, it is at ball mill SAG AT3042, ball mill AT3301 and cyanide mixing tank AT8045. Maintenance and calibration frequencies were determined. Testing of monitors with standard gas (10ppm HCN) is performed weekly. The procedures require that for every activity related to cyanide, at least one member of the work team must be using a portable monitor device (HCN detector). Maintenance and handling of cyanide monitoring equipments are described in the procedure "PPO-044 rev2 Procedimiento uso de medidores de gas cianhídrico portátil y estacionários". A calibration program is in place, as per procedure "Registro mantención 2010 medidores HCN – Operaciones Plantas". During the audit, the auditor found that warning signs have been placed where cyanide is used advising workers that cyanide is present, and that smoking, open flames, eating and drinking are not allowed and that suitable personal protective equipment must be worn. The auditor found that low-pressure eye wash stations were in place. There is a procedure to manage emergency showers in the cyanide warehouse "SGA-GC-P-013 rev00" and dry powder fire extinguishers located at strategic locations throughout the operation. A maintenance and inspection control system of fire extinguishers is in place. It was found that tanks and pipelines are identified to alert workers of presence of cyanide. Direction of cyanide flow is indicated and workers are trained about colors code and warning signs. The auditor evidenced the presence of NaCN MSDS in the warehouse, mixing area. Information is written in local language (Spanish). It was found a procedure to investigate incidents related to cyanide. Any incidents involving cyanide did happen at the operation.

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

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| The operation is | **X** in full compliance with<br>☐ in substantial compliance with<br>☐ not in compliance with | Standard of Practice 6.3 |

*Summarize the basis for this Finding/Deficiencies Identified:*
El Peñon operation has a resuscitator available in the ambulance, as well as a spare unit. Oxygen supply is available in the plant and laboratory. The ambulance has emergency communication system and an antidote kit. Inspection records for the ambulance were checked (antidote kits, first aid equipment and materials), as well as inspection records of oxygen cylinders located in the plant and laboratory. The procedure "Procedimientos de primeros auxilios em emergencia por cianuro" ESACHS, ago-2009 has been prepared to respond to cyanide exposures. There are also procedures for the medical team related to the cyanide mixing. The operation have its own on-site capability (doctors, nurses, these personnel were trained in legally institutions recognized) to provide first aid or medical assistance to workers exposed to cyanide, as found by the auditors. There is a procedure to transport exposed workers. This document comprises ambulance and helicopter assistance. The document "Certificado de Afiliación" # 1085276 is an agreement between El Peñon and Asociación Chilena de Seguridad – ACHS, according to the law #16.744 from Seguro Social Obligatório, August 1st, 2002 to prepare medical providers with adequate staff, equipment and expertise. Drill records were checked and found in compliance e.g.: report dated April 20th, 2010.An action plan and measures records were originated from the drill. There was no need to change the Emergency Plan.

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

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

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| The operation is | **X** in full compliance with<br>☐ in substantial compliance with<br>☐ not in compliance with | Standard of Practice 7.1 |

*Summarize the basis for this Finding/Deficiencies Identified:*
There is an Emergency Plan "SGA-Procedimiento Contingencias con Cianuro rev01". The Plan considers the potential cyanide failure scenarios appropriate for its site-specific environmental and operating circumstances. There is transport emergency plan "Plan de Contingencias del Transporte Para Clientes Mineros de Verasay" P2-09 rev01 dez/2008, that considers transportation route(s), physical and chemical form of the cyanide, method of transport, the condition of the road, and the design of the transport vehicle. It was found that the emergency plan describes accordingly the cyanide antidotes and first aid measures for cyanide exposure, control of releases at their source, and containment, assessment, mitigation and future prevention

of releases, as well as clearing site, personnel and potentially affected communities.

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

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| The operation is | **X** in full compliance with<br>☐ in substantial compliance with<br>☐ not in compliance with | Standard of Practice 7.2 |

*Summarize the basis for this Finding/Deficiencies Identified:*
Meeting records to develop emergency plan with the entire workforce from the plant were checked. El Peñon makes the involved companies in the mutual protocol aware about the cyanide emergency planning and response process.
The community was not involved (there is no communities in the surroundings of the operation), as declared in the item 7.2.2. The nearest city to El Peñon is 150 km away (Antofagasta). There are two other mining operations (Zaldivar and Escondida) located 50km away, approximately, from the operation. A mutual emergency protocol "Protocolo de Cooperacion Mútua Ante Emergencias" among Minera Escondida, Barrick Zaldivar and Yamana El Peñon was made to reinforce the response to emergencies that can occur to these companies. The emergency plan includes local response agencies such as outside responders (firefighters from Antofagasta) and medical facilities (Hospital facilities at Antofagasta). A visitation program is in place. The emergency plan is recent and must be revised/ updated every year or after an incident. The procedure "SGA-GSSMA-P012 rev06 item 6.5" establishes that the workforce will be involved in the revision of the emergency plan and that it will be also revised if a drill requires a change.

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

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| The operation is | **X** in full compliance with<br>☐ in substantial compliance with<br>☐ not in compliance with | Standard of Practice 7.3 |

*Summarize the basis for this Finding/Deficiencies Identified:*
The cyanide-related elements of the Emergency Response Plan:
a) Designate primary and alternate emergency response coordinators who have explicit authority to commit the resources necessary to implement the Plan;
b) Identify Emergency Response Teams;
c) Require appropriate training for emergency responders;
d) Include call-out procedures and 24-hour contact information for the coordinators and response team members;
e) Specify the duties and responsibilities of the coordinators and team members;
f) List emergency response equipment, including personal protection gear, available along transportation routes and/or on-site;
g) Include procedures to inspect emergency response equipment to ensure its availability;

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The plan does not describe specific responsibilities for outside responders, such as community members, because there is no community close to the plant. It is not feasible to involve the fire fighters of Antofagasta, located 150 km away of El Peñon, although the emergency procedures were formally communicated to external responders (firefighters and hospitals, among others) and, if necessary, these external responders will attend any emergency at the operation.
The ambulance and helicopter support have been made aware of their potential role in the event of a cyanide emergency, and they have been trained in mock drills.

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

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| The operation is | **X** in full compliance with<br>☐ in substantial compliance with<br>☐ not in compliance with | Standard of Practice 7.4 |

*Summarize the basis for this Finding/Deficiencies Identified:*
There is a communication procedure "Plan Específico Procedimiento Comunicación en Emergencias" where the contact information is included. The communication procedure is applicable to internal and external stakeholders, including the cyanide producer, public authorities, outside responders.

*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.*

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| The operation is | **X** in full compliance with<br>☐ in substantial compliance with<br>☐ not in compliance with | Standard of Practice 7.5 |

*Summarize the basis for this Finding/Deficiencies Identified:*
The emergency plan defines how to neutralize solutions or solids, indicating the concentration of neutralizer solution according to the solution or solid contaminated and according to the area of soil contaminated. Management and/or disposal of spill clean-up debris is defined at the document "Plan Especifico de Procedimiento de Emergencia Con Cianuro de Carácter Catastrófico"item 6.5.6. Provision of an alternate drinking water supply is not applicable, because every drinking water for El Peñon is bottled. The Plan does not prohibit the use of chemicals such as sodium hypochlorite, ferrous sulfate and hydrogen peroxide to treat cyanide that has been released into surface water, as El Peñon is located in Atacama desert (no surface water in the surroundings of the operation). The plan "Plan Especifico de Procedimiento de Emergencia Con Cianuro de Carácter Catastrófico" defines strategies of environment monitoring.

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

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| The operation is | **X** in full compliance with<br>☐ in substantial compliance with<br>☐ not in compliance with | Standard of Practice 7.6 |

*Summarize the basis for this Finding/Deficiencies Identified:*
It is established that the emergency plan must be revised every year or after an incident. The procedure "SGA-GSSMA-P012 rev06 item 6.5" establishes that it will be also revised if a drill requires a change. Mock cyanide emergency drills are conducted periodically as part of the Emergency Response Plan evaluation process, as checked in the program "Programa de simulacros orientado a Emergencias con Cianuro 2010". A drill record was checked: April 20th, 2010. An action plan and measure record was checked. Also observed a drill report performed by the cyanide producer and the cyanide transporter, involving an accident during the cyanide transportation to the operation. There was no need of change in the emergency plan.

***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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| The operation is | **X** in full compliance with<br>☐ in substantial compliance with<br>☐ not in compliance with | Standard of Practice 8.1 |

*Summarize the basis for this Finding/Deficiencies Identified:*
Was evidenced that the operation, in conjunction with the cyanide supplier, designed , documented and implemented a general training program related to cyanide characteristics and associated SHE risks, transport, handling & storage, mixing, emergencies & first aid. This general training program is offered to everybody (employees and contractors), that will work in the operation. Was implemented in 2009 and refreshed in 2010, according to internal training management procedures. Records associated with these training sessions were reviewed during the audit.

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*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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| The operation is | **X** in full compliance with<br>☐ in substantial compliance with<br>☐ not in compliance with | Standard of Practice 8.2 |

*Summarize the basis for this Finding/Deficiencies Identified:*
Evidenced that the operation designed, documented and implemented a specific training program for that workers that will work at the process plant (cyanide loop). The workforce is trained in these operational procedures, which were developed with the support of the workers, before they are qualified to do their tasks alone. Every new employee (job rotation is very low) shall pass through this operational training program before working with cyanide (evidenced that two new operators were admitted during 2010 and were approved after the operational training). Refresh training is performed annually. All operational training is provided by experienced workers as evidenced during the assessment. Planned job observations are used to monitor the operational training effectiveness. Records of such observations were evidenced and reviewed.

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

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| The operation is | **X** in full compliance with<br>☐ in substantial compliance with<br>☐ not in compliance with | Standard of Practice 8.3 |

*Summarize the basis for this Finding/Deficiencies Identified:*
There are evidences that plant operators and maintenance employees did collaborated to elaborate the Emergency Plan and were trained in the emergency procedures, through the participation in the drilling exercises. Training records for rescue team and first aid were found, including plant operators and maintenance employees. They take part in routine drills to test and improve their response skills, records were found. All plant workers are trained on decontamination activities as well as are trained on first aid procedures. Evidences of communication with community members (Antofagasta town), medical providers, hospital, firefighters and police officer, about the elements of the Emergency Response Plan related to cyanide, were observed.

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***9. DIALOGUE: Engage in public consultation and disclosure.***

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

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| The operation is | **X** in full compliance with<br>☐ in substantial compliance with<br>☐ not in compliance with | Standard of Practice 9.1 |

*Summarize the basis for this Finding/Deficiencies Identified:*
Was evidenced that the operation defined and implemented communication channels in order to improve the communication process with stakeholders (internal and external). Any stakeholder is allowed to contact the operation through a specific telephone line. The operation also planned and promoted specific meetings with external stakeholders. One of these specific meetings with public authorities was performed during the audit and was evidenced by the auditor. The operation signed an emergency cooperation protocol with two other mining operations that are located in the surroundings of the operation (inside a 40 Km radius). The operation also made available to the general public, specific folders describing the cyanide management system and contact information. There is not any community between the town of Antofagasta (nearest town) and the operation (150Km far from the town).

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

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| The operation is | **X** in full compliance with<br>☐ in substantial compliance with<br>☐ not in compliance with | Standard of Practice 9.2 |

*Summarize the basis for this Finding/Deficiencies Identified:*
Was evidenced (see SoP 9.1) that the operation did initiate dialogue with stakeholders (internal and external) about the cyanide management at the operation. Internal dialogue was implemented and maintained through the general training (see SoP 8.1) and the external dialogue was implemented and maintained through specific meetings with stakeholders (public authorities, army, firefighters, hospitals). The cyanide producer is also involved in these planned meetings.

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

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| The operation is | **X** in full compliance with<br>☐ in substantial compliance with<br>☐ not in compliance with | Standard of Practice 9.3 |

*Summarize the basis for this Finding/Deficiencies Identified:*
The operation designed and documented, as previously mentioned, specific folders addressing important information about the cyanide management at the operation, including contact channels. This folder is available to the general public in general and was distributed to the internal stakeholders and to the specific ones external stakeholders during the meetings before mentioned (SoP 9.1 and SoP 9.2). The education level of the Chilean society is very high and it was unnecessary to develop methods to communicate cyanide related issues in a verbal way to illiterate persons. The operation designed and documented an emergency communication procedure that shall be used in the event of any incident, not only linked with cyanide. There were not any incident related to cyanide that should be communicated. In the event of any cyanide related incident, the established procedure addresses the following information:

a) Cyanide exposure resulting in hospitalization or fatality? No cases. In the event of such incidents, the operation shall communicate the ACHS (Asociación Chilena de Seguridad) y la ESACH (Servicios de Salud).

b) Cyanide releases off the mine site requiring response or remediation ? No cases. In the event of such incident, the operation shall communicate DuPont Chile (consigner) and local EPA (COREMA), according to the emergency response plan.

c) Cyanide releases on or off the mine site resulting in significant adverse effects to health or the environment? No cases. In the event of such incidents, the operation shall communicate the ACHS (Asociación Chilena de Seguridad) y la ESACH (Servicios de Salud) and DuPont Chile (consigner).

d) Cyanide releases on or off the mine site requiring reporting under applicable regulations? No cases. In the event of such incident, the operation shall communicate with SERGEOMIN (Chilean Mining Authority) and local EPA (COREMA).

e) Releases that are or that cause applicable limits for cyanide to be exceeded? No cases. In the event of such incident, the operation shall communicate with SERGEOMIN (Chilean Mining Authority) and local EPA (COREMA).

f) The operation has also implemented a telephone line (56+55) 566733, where the operation can be contacted by any stakeholders. This telephone number was communicated and is available to the general public.

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