

February 2012

**ICMI RECERTIFICATION  
SUMMARY AUDIT REPORT**

**Phoenix Mine, Nevada,  
United States of America**

**Submitted to:** International Cyanide Management Institute (ICMI)  
888 16<sup>th</sup> Street, NW-Suite 303  
Washington, D.C. 20006  
United States of America

**And:** Newmont Mining Corporation  
Phoenix Operations  
Post Office Box 1657  
Battle Mountain, NV 89820  
United States of America

**Project Number:** 113-81788

**Distribution:**  
ICMI - 1 copy (pdf)  
Phoenix Mine - 1 copy (pdf)  
Golder Associates Inc. - 1 copy (pdf)



**A world of  
capabilities  
delivered locally**





## Table of Contents


<b>1.0</b>	<b>SUMMARY AUDIT REPORT FOR GOLD MINING OPERATIONS</b>	<b>1</b>
<b>2.0</b>	<b>LOCATION DETAIL AND DESCRIPTION OF OPERATION</b>	<b>2</b>
2.1	Mine Location	2
2.2	Background	3
<b>3.0</b>	<b>SUMMARY AUDIT REPORT</b>	<b>5</b>
3.1	Auditors Findings	5
	Name of Other Auditors	5
	Dates of Audit	5
3.2	Encourage Responsible Cyanide Manufacturing by Purchasing from Manufacturers that Operate in a Safe and Environmentally Protective Manner	6
<b>4.0</b>	<b>PRINCIPLE 2 – TRANSPORTATION</b>	<b>7</b>
4.1	Protect Communities and the Environment during Cyanide Transport	7
<b>5.0</b>	<b>PRINCIPLE 3 – HANDLING AND STORAGE</b>	<b>8</b>
5.1	Protect Workers and the Environment during Cyanide Handling and Storage	8
<b>6.0</b>	<b>PRINCIPLE 4 – OPERATIONS</b>	<b>10</b>
6.1	Manage Cyanide Process Solutions and Waste Streams to Protect Human Health and the Environment	10
<b>7.0</b>	<b>PRINCIPLE 5 – DECOMMISSIONING</b>	<b>16</b>
7.1	Protect Communities and the Environment from Cyanide through Development and Implementation of Decommissioning Plans for Cyanide Facilities	16
<b>8.0</b>	<b>PRINCIPLE 6 – WORKER SAFETY</b>	<b>17</b>
8.1	Protect Workers’ Health and Safety from Exposure to Cyanide	17
<b>9.0</b>	<b>PRINCIPLE 7 – EMERGENCY RESPONSE</b>	<b>20</b>
9.1	Protect Communities and the Environment through the Development of Emergency Response Strategies and Capabilities	20
<b>10.0</b>	<b>PRINCIPLE 8 – TRAINING</b>	<b>24</b>
10.1	Train Workers and Emergency Response Personnel to Manage Cyanide in a Safe and Environmentally Protective Manner	24
<b>11.0</b>	<b>PRINCIPLE 9 – DIALOGUE</b>	<b>26</b>
11.1	Engage in Public Consultation and Disclosure	26



**1.0 SUMMARY AUDIT REPORT FOR GOLD MINING OPERATIONS**

**Name of Mine:** Phoenix Mine  
**Name of Mine Owner:** Newmont Mining Corporation  
**Name of Mine Operator:** Phoenix Mine  
**Name of Responsible Manager:** Mr. Tom Kerr  
Senior Regional Vice President  
North America Operations  
**Address:** Newmont Mining Corporation  
Phoenix Operations  
Post Office Box 1657  
Battle Mountain  
**State/Province:** Nevada  
**Country:** United States  
**Telephone:** +1 775 778 4243  
**Fax:** + 1 775 778 2513  
**E-Mail:** Tom.Kerr@Newmont.com

Phoenix Mine  
Name of Facility

  
\_\_\_\_\_  
Signature of Lead Auditor

February 3, 2012  
Date



## 2.0 LOCATION DETAIL AND DESCRIPTION OF OPERATION


### 2.1 Mine Location

The Phoenix Mine is located in Lander County, Nevada, USA, approximately 12 miles south of the Town of Battle Mountain, as shown in Figure 1 below.



Figure 1: Regional Location Map

Phoenix Mine  
Name of Facility

  
Signature of Lead Auditor

February 3, 2012  
Date



## 2.2 Background

The Phoenix Mine has a long history of mining starting with the first recorded discovery of copper ore in the Copper Canyon area in 1864. Copper mining prevailed into the early 20th century and precious metal lode mining occurred throughout the first half of the 20th century. Placer gold mining, the Natomas dredge operations, took place in the 1940's and early 1950's alongside open pit copper mining and flotation milling by the Duval Corporation that continued into the 1970's. Mining and milling of lode gold ore began in the late 1970's, with the conversion of the Copper Canyon mill from copper concentrate production to a cyanide leach carbon-in-pulp (CIP) adsorption facility in 1978, and was continued into the early 1990's by Battle Mountain Gold Company when heap leaching of lower grade disseminated gold ore began (Reona Heap Leach Pad). Mining and milling of ore from the Fortitude Pit commenced in September 1992 and continued until the open pit mine ceased production in early 1993; and the Fortitude Mill ceased operations in March 1993. In October 1993, the Reona Heap Leach Pad was constructed to expand open pit mining and include gold heap leaching operations. Extraction of leach-grade gold ore ceased during the first quarter of 2006, and leaching of the Reona Heap Leach Pad was discontinued in July 2006.

The Phoenix Mine includes the Phoenix, Midas, Reona, and Iron Canyon open pits and excavation of the existing Northeast Extension, Tomboy, Midas, and Fortitude gold ore stockpiles. Waste rock from expanded mining operations is being deposited in existing and sequentially mined open pits, deposited over existing inactive waste rock and copper leach dumps, and on new waste rock facilities located on adjacent undisturbed ground.


The Phoenix Mill, constructed in 2005, is designed for the beneficiation of run-of-mine grade ores from the mining operations. Gold, silver, and copper are recovered by: (1) coarse gold recovery by gravity separation; (2) two-stage flotation to produce a copper sulfide concentrate for offsite processing; and (3) further processing of the second-stage flotation tailings using a carbon-in-pulp leach (CIP) circuit for additional gold and silver recovery.

Run-of-mine ore is fed at a nominal 35,000 tons per day to the primary crushing plant and then conveyed to the semi-autogenous grinding (SAG) mill where water is added for grinding. Underflow from the SAG mill drops into a sump and mixes with discharge from the ball mills. The sump slurry is pumped to a bank of cyclones. The grinding cyclone overflow reports to the rougher flotation. The underflow stream is divided and conveyed to each of the ball mills. A split of the discharge from each ball mill is pumped to gravity gold recovery units and the concentrates from the gravity units are diverted to an intensive cyanidation unit (ICU). The gravity unit tails are pumped to a contact flotation cell to recover finer-grained gold.

Slurry from the grinding cyclone overflow feeds the rougher flotation cells. The rougher flotation concentrate and contact cell concentrate are combined and cleaned in two stages of gravity separation. Concentrate from the two-stage gravity separation unit is directed to a primary cleaner column flotation cell. Rougher scavenger concentrate, along with concentrate from the cleaner flotation cells and the cleaner scavenger flotation cells, is sent to the flotation regrind mills. The regrind concentrate is then cleaned in three stages of flotation utilizing both mechanical and column flotation technology. A magnetic separator removes magnetic concentrates from the cleaner flotation stream and gold and silver are recovered from the magnetic concentrate via a gravity recovery unit.

Tailings from the rougher and cleaner scavenger circuits are pumped to a pair of deslime cyclones at the head of the CIP leach circuit. Most of the gold in the slurry reports to the cyclone underflow while most of the cyanide soluble copper reports to the cyclone overflow. The cyclone underflow is pumped to the CIP leach tanks and combined with cleaner scavenger tails. Lime and cyanide solution are added at the head CIP leach tank to respectively control pH and enhance precious metal dissolution. The slimes material from the cyclone overflow is pumped to the fines thickener tank and dewatered using flocculant and reclaim water for make-up. The thickened slurry (underflow) is pumped to the CIP circuit tails tank and the thickener overflow is returned as mill make-up water. The CIP leach tanks discharge to the CIP leach circuit, where dissolved precious metals are adsorbed onto activated carbon particles. Loaded carbon is collected for stripping and

Phoenix Mine  
Name of Facility

  
Signature of Lead Auditor

February 3, 2012  
Date



## ICMC RECERTIFICATION SUMMARY REPORT

the tails slurry passes through a Caro's acid (peroxymonosulfuric acid) destruction circuit prior to discharge to the tailings impoundment. A Caro's acid generator is located within the mill.

Loaded carbon is transferred from the mill CIP leach circuit by pipeline. The carbon is washed with hydrochloric acid in the acid wash tank, neutralized with caustic soda, and pumped to the strip vessel. Copper is removed from the carbon by an ambient temperature cyanide rinse and the resulting rinse solution is pumped to the leach circuit. Following the cyanide rinse for copper, the carbon is stripped of precious metals with a hot caustic solution. Barren carbon is conveyed through a regeneration kiln and the activated product is mixed with fresh make-up carbon and pumped to CIP agitator tank for reintroduction into the CIP recovery circuit.

Pregnant solution from the carbon stripping process is pumped through a circuit comprised of electrowinning cells. The electrowinning precipitate is filtered, heated in a retort to dry the product, and then shipped to Newmont facilities at Twin Creeks or the Carlin complex for refining of precious metals.

Historic tailings impoundments on site consist of two separate impoundments separated by an east-west earthen embankment. The northern portion of the impoundment was developed first and was used to contain tailings from the historic copper milling process until being filled in 1970. The southern portion of the impoundment was constructed in 1972, to store copper tailings and gold tailings from the more recent gold mining and milling operations. Neither impoundment was constructed with an engineered liner. The Phoenix Project consists of a constructed lined tailings impoundment over the existing northern copper tailings impoundment. The synthetic-lined impoundment basin is covered with a minimum 18-inch thick cover of locally borrowed alluvial silty sand and gravel to protect the synthetic liner and to provide relief for hydraulic head pressure and promote solution collection and flow into the underdrain system. The southern portion of the historic impoundment has been covered for closure.


Tailings slurry is conveyed by gravity from the Phoenix Mill to the Phoenix Tailings Storage Facility (TSF) through a 20-inch diameter slurry pipeline. Reclaim water reports to the Reclaim Pond, which is lined and contains a leak detection system. Reclaim water is pumped back to the Phoenix mill via a pipeline that shares a common corridor with the slurry pipeline. Both pipelines are largely constructed above ground.

The Phoenix cyanide facilities are largely unchanged from the initial certification audit in November 2008. However, there have been two facility changes since that time:

- Improvements to the cyanide detoxification circuit (Caro's Acid) to increase the retention time for the tailings slurry and reagent, thereby improving the efficiency of the cyanide detoxification system. The modification was approved by the State of Nevada in January 2008 and constructed later in 2008.
- Stage 3 and 4 expansions of the Phoenix Tailings Storage Facility completed in November 2009 and September 2011, respectively.

The Reona Heap Leach continues to be permanently inactive and no longer receives process solution, as was the case during the initial certification audit. Cyanide use ceased in July 2006 when the sodium cyanide storage tank was emptied. Recirculation of the residual solution ceased in May 2008, and all draindown is now conveyed to the Phoenix Tailings Storage Facility. Water quality data from 2008 to 2011 from samples collected at the Reona pregnant solution tank demonstrate that the concentration of WAD cyanide in the residual solution was continuously below 0.5 mg/L. Therefore, the Reona Heap Leach is no longer a "cyanide facility" that is subject to the Code.

Phoenix Mine  
Name of Facility

  
Signature of Lead Auditor

February 3, 2012  
Date

February 2012  
Project No. 113-81788



3.0 SUMMARY AUDIT REPORT

3.1 Auditors Findings

Phoenix is: [X] in full compliance with The International Cyanide Management Code
[ ] in substantial compliance with
[ ] not in compliance with

This operation has experienced compliance problems during the previous three-year audit cycle, which are discussed in this report under Standard of Practice 9.3. These incidents have not been "significant cyanide incidents" subject to the notification requirements in Item 6 of the ICMC signatory application; they do not affect the compliance status. These incidents did not involve worker exposures to cyanide. Rather, these incidents have been minor releases of cyanide-bearing solutions to soil that have been reported to regulators, and thus are subject to listing under Question 3 of the Standard of Practice 9.3.

Audit Company: Golder Associates Inc.
Audit Team Leader: Kent Johnejack, Lead Auditor and Gold Mining Technical Specialist
Email: kjohnejack@golder.com

Name of Other Auditors

Table with 2 columns: Name, Position and Signature. Row 1: Ivon Aguinaga, Mining Technical Specialist, [Signature]. Row 2: Independent Mining Technical Specialist for Standard of Practice 4.3 (Water Balance) and portions of Standard of Practice 4.8 (QA/QC), [Signature].

Dates of Audit

The Recertification Audit was undertaken within four days from November 7 to 10, 2011.

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

Phoenix Mine
Name of Facility

[Signature]
Signature of Lead Auditor

February 3, 2012
Date







Principle 1 – production

### 3.2 Encourage Responsible Cyanide Manufacturing by Purchasing from Manufacturers that Operate in a Safe and Environmentally Protective Manner

**Production 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**

in full compliance with

Phoenix is

in substantial compliance with

**Production Practice 1.1**


not in compliance with

**Summarize the basis for this finding:**

Phoenix is in FULL COMPLIANCE with Standard of Practice 1.1, requiring the operation 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.

Phoenix has committed to only purchase cyanide from a producer which is compliant with the Code. Cyanco, located in Winnemucca, Nevada, is the cyanide producer and supplier for the Phoenix operation. Cyanco’s production facility was certified as compliant by the ICMI on October 11, 2006 and fully recertified on February 2, 2010, as shown on the ICMI website. The auditors reviewed bills of lading from the recertification period that confirmed Phoenix used cyanide from only Cyanco.

Phoenix Mine  
Name of Facility

  
\_\_\_\_\_  
Signature of Lead Auditor

February 3, 2012  
Date







4.0 PRINCIPLE 2 – TRANSPORTATION

4.1 Protect Communities and the Environment during Cyanide Transport

Transport 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.

in full compliance with

Phoenix is

in substantial compliance with

Transport Practice 2.1

not in compliance with

Summarize the basis for this finding:

Phoenix is in FULL COMPLIANCE with Standard of Practice 2.1, requiring that the operation establish clear lines of responsibility for safety, security, release prevention, training and emergency response in written agreements with producers, distributors and transporters.

Newmont has a sodium cyanide supply contract with Cyanco, which specifies that the operation takes ownership of the cyanide at the time of delivery. Although the contract does not define responsibility for the Code Transportation Principles and Standards of Practice, the Cyanco and TransWood certification reports indicate they are aware of their responsibilities under the Code. Cyanco is by contract solely responsible for the production and transport of sodium cyanide to the delivery point at Phoenix. Cyanco is a signatory producer to the Code and subcontracts TransWood for transportation of the cyanide to Phoenix. TransWood is a signatory to the Code and has been recertified as fully compliant with the Code with clear lines of responsibility for safety, security, release prevention, training, and emergency response. The TransWood initial certification date was October 11, 2006 and the recertification date was January 20, 2010, as shown on the ICMI website.

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

in full compliance with

Phoenix is

in substantial compliance with

Transport Practice 2.2

not in compliance with

Summarize the basis for this finding:

Phoenix is in FULL COMPLIANCE with Standard of Practice 2.2, requiring that cyanide transporters implement appropriate emergency response plans and capabilities and employ adequate measures for cyanide management.

Cyanco is by contract solely responsible for the production and transport of cyanide to the delivery point at Phoenix. Cyanco is a signatory producer to the Code and subcontracts TransWood for transportation of the cyanide to Phoenix. TransWood is a signatory to the Code and has been recertified as fully compliant with the Code with appropriate emergency response plans and capabilities and have adequate cyanide management control measures. The TransWood recertification date was January 20, 2010. The auditors reviewed bills of lading from the recertification period that verified that the cyanide delivered to Phoenix was produced by Cyanco and transported by TransWood.

Phoenix Mine  
Name of Facility

Signature of Lead Auditor

February 3, 2012  
Date





5.0 PRINCIPLE 3 – HANDLING AND STORAGE

5.1 Protect Workers and the Environment during Cyanide Handling and Storage

Handling and Storage

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

[X] in full compliance with

Phoenix is [ ] in substantial compliance with Handling and Storage Practice 3.1

[ ] not in compliance with

Summarize the basis for this finding:

Phoenix is in FULL COMPLIANCE with Handling and Storage Practice 3.1, requiring that cyanide handling and storage facilities are designed and constructed consistent with sound, accepted engineering practices, quality assurance/quality control (QA/QC) procedures, spill prevention and spill containment measures.

All facilities for unloading and storing cyanide have been designed and constructed by professional engineers in accordance with local, state and federal regulatory requirements. In addition, the design and construction of these facilities have been reviewed and approved by Nevada Department of Environmental Protection. No changes or modifications have been made to these facilities since the initial certification audit.

Phoenix has a single liquid cyanide unloading and storage tank. The liquid cyanide storage tank has a high level alarm and ultrasonic level indicator. The barren and pregnant tanks also have ultrasonic level indicators and high level alarms. Tank levels are monitored from the control room. The unloading and storage areas are located away from public access and no surface water bodies are nearby. The liquid cyanide storage tank is located outside with adequate ventilation and has a fixed HCN monitor. The cyanide unloading pad is constructed with cast-in-place reinforced concrete to prevent seepage to the subsurface. The cyanide storage tank is within a cast-in-place reinforced concrete containment to contain releases of cyanide. Incompatible chemicals are stored in separate concrete containment areas. Fences are installed around the mine site. The auditors inspected these facilities.

Handling and Storage

Practice 3.2: Operate unloading storage and mixing facilities using inspections, preventative maintenance and contingency plans to prevent or contain releases and control and respond to worker exposures.

[X] in full compliance with

Phoenix is [ ] in substantial compliance with Handling and Storage Practice 3.2

[ ] not in compliance with

Summarize the basis for this finding:

Phoenix is in FULL COMPLIANCE with Handling and Storage Practice 3.2 requiring that cyanide handling and storage facilities are operated using inspections, preventive maintenance and contingency plans to prevent or contain releases and control and respond to worker exposures.

Cyanide is delivered as a liquid in tankers. The liquid is transferred from the tanker to a cyanide storage tank and there are no empty cyanide containers that require disposal. Phoenix has developed a procedure entitled "Reagent Delivery/Offloading" that includes measures to prevent exposures and releases of cyanide

Phoenix Mine
Name of Facility

[Signature]
Signature of Lead Auditor

February 3, 2012
Date






## ICMC RECERTIFICATION SUMMARY REPORT

during unloading and storage. The procedure also covers the responsibilities for the transporter and the site personnel. The auditors verified that Phoenix has a copy of Cyanco's Sodium Cyanide Delivery Procedure onsite. The Cyanco procedure details step by step the offload procedures and includes photographs of all valves and couplings. Phoenix requires appropriate personal protective equipment and observation by an operator during the offloading. Both the transporter and operator check to confirm that the storage tank has sufficient capacity for the unloading. The Phoenix operator is trained in the transporter emergency procedures, the proper operation of valves, and the emergency shut off locations. The auditors reviewed the procedures and observed a cyanide delivery.

Phoenix Mine  
Name of Facility

  
Signature of Lead Auditor

February 3, 2012  
Date

February 2012  
Project No. 113-81788



6.0 PRINCIPLE 4 – OPERATIONS

6.1 Manage Cyanide Process Solutions and Waste Streams to Protect Human Health and the Environment

Operations Practice 4.1: Implement management and operating systems designed to protect human health and the environment including contingency planning and inspection and preventative maintenance procedures.

in full compliance with

Phoenix is

in substantial compliance with

Operations Practice 4.1

not in compliance with

Summarize the basis for this finding:

Phoenix is in FULL COMPLIANCE with Standard of Practice 4.1, requiring that the operation implement management and operating systems designed to protect human health and the environment including contingency planning and inspection and preventive maintenance procedures.

Phoenix has developed a series of standard operating procedures, standard task procedures, other procedures, and operating plans/manuals that describe the practices necessary for the safe and environmentally sound operation of the facility, including the specific measures needed for compliance with the Code and regulatory requirements. The Phoenix Mine Operating Plan covers the water management strategies for process facilities, including actions for emergency or unusual operating conditions and unexpected temporary closure. The auditors reviewed the plans and procedures.

Phoenix has developed and implements inspection and preventative maintenance programs to assure the continuous and safe operation of the equipment for cyanide management. Inspections include cyanide tanks, secondary containments, pipelines, pumps, valves, tailings storage facility, reclaim pond and the leak detection and collection systems. Preventive maintenance programs cover pH and HCN meters, emergency generators, ultrasonic tank level indicators, pumps, valves, and tanks. The inspection and maintenance frequency is sufficient to assure that cyanide facilities are functioning within the design parameters. The auditors reviewed inspection forms and preventative maintenance records from the recertification period.

Phoenix has a formal change management procedure wherein proposed changes are assessed through a Management of Change Form. The auditors reviewed a completed change form for a cyanide-related upgrade to the detoxification system during the recertification period.

Phoenix addresses contingency procedures for upsets in the facility’s water balance in the “Phoenix Mine Operating Plan. This plan covers strategies for water management during emergency or unusual conditions, or unexpected temporary shutdown. The auditors reviewed this plan.

Phoenix uses the Ellipse system for identifying, assigning responsibility, scheduling, and tracking completion of the preventative maintenance activities. The Ellipse system identifies future activities for regular preventative maintenance and includes information on the task requirements and completion. The auditors examined completed preventative maintenance work orders from the recertification period.

Phoenix has two fixed diesel generators to operate critical functions at the mill during power outages. The auditors reviewed inspection and testing records from the recertification period.

Phoenix Mine  
Name of Facility

Signature of Lead Auditor

February 3, 2012  
Date





## ICMC RECERTIFICATION SUMMARY REPORT

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

in full compliance with

Phoenix is

in substantial compliance with

**Operations Practice 4.2**

not in compliance with

**Summarize the basis for this finding:**

Phoenix is in FULL COMPLIANCE with Standard of Practice 4.2, requiring that the operation limit the use of cyanide to that optimal for economic recovery of gold so that the waste tailings material has as low a cyanide concentration as practical.

Phoenix may receive ore for processing from the Phoenix, Midas, Reona, Minnie, and Iron Canyon open pits and from excavation of existing Northeast Extension, Tomboy, Midas and Fortitude gold ore stockpiles. Feasibility-level testing indicated a cyanide consumption of 1.0 lb/ton of ore. Current cyanide consumption has been reduced to 0.2 pound per ton (lb/ton) of ore to achieve the cyanide detoxification target of 25 milligrams per liter (mg/L) of WAD cyanide. Phoenix employs a Caro's Acid cyanide destruction system to limit the concentration of cyanide in the tailings. The auditors reviewed spreadsheets and technical memoranda, and inspected the cyanide destruction system during the site visit.

Phoenix adjusts the cyanide addition rates in the leach tanks and the CIP #1 tank on a daily basis to maintain a WAD cyanide concentration of 25 mg/L at the tailings spigot. If the cyanide content is lower than the target, the addition set point is increased in the CIP #1 tank and leach tanks. Cyanide content and pH are analyzed manually using a titration method once per shift. The auditors reviewed floor logs from the recertification period.

**Operations Practice 4.3: Implement a comprehensive water management programme to protect against unintentional releases.**

in full compliance with

Phoenix is

in substantial compliance with

**Operations Practice 4.3**

not in compliance with


**Summarize the basis for this finding:**

Phoenix is in FULL COMPLIANCE with Standard of Practice 4.3, requiring the operation to implement a comprehensive water management program to protect against unintentional releases.

Phoenix has developed a comprehensive water balance that meets the requirements of a water management program addressing the uncertainty and variability of climatic data to prevent overtopping. The model is a probabilistic (stochastic) model, which tracks water flow throughout the engineered water management facilities at the operation, including mine dewatering systems, the mill and process circuits and the tailings storage facility. The model incorporates all necessary parameters in a reasonable manner. The auditors reviewed the water balance model and its documentation, as well as interviewed the Phoenix staff that run the model.

Based on the combination of inspections and monitoring conducted for the fluid management facilities by the Environmental Department and the Process Department, and upon the online monitoring of water levels conducted at the reclaim pond, Phoenix demonstrated to the auditors that its inspection and monitoring program serves to implement the water balance and prevent overtopping of the tailings storage facility and the reclaim pond. As a condition of the Water Pollution Control Permit, Phoenix maintains adequate freeboard above the maximum design storage capacities of these facilities. The auditors reviewed the inspection and monitoring records, and observed the facilities during the site visit.

Phoenix Mine  
Name of Facility

  
Signature of Lead Auditor

February 3, 2012  
Date



## ICMC RECERTIFICATION SUMMARY REPORT

Phoenix collects precipitation data from an onsite meteorological station for regular input into the model. The model is also updated ahead of significant changes to the water management system and life of mine changes. The auditors observed the precipitation data and model forecasts from the recertification period.

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

in full compliance with

Phoenix is

in substantial compliance with

**Operations Practice 4.4**

not in compliance with

**Summarize the basis for this finding:**

The operation is in FULL COMPLIANCE with Standard of Practice 4.4, requiring the operation implement measures to protect birds, other wildlife and livestock from adverse effects of cyanide process solutions.

Phoenix has implemented several different measures to restrict access by wildlife and livestock to open solutions containing cyanide. The perimeter of the mine property is surrounded by a fence to prevent access by large wildlife and livestock. In addition, a perimeter fence has been installed around the reclaim pond. The tailings storage facility is equipped with propane-fired air cannons. Also, process personnel are trained and ready to support bird hazing and rescue on the tailings impoundment, if required. The auditors observed these physical measures in the field.

There are no open waters at Phoenix where the concentration of WAD cyanide exceeds 50 mg/L. Phoenix has implemented a tailings cyanide detoxification process. The tailings slurry passes through a Caro's Acid (peroxymonosulfuric acid) destruction circuit at the mill prior to discharge to the tailings storage facility. The auditors observed spreadsheets of daily cyanide measurements from the recertification period.

Phoenix conducts daily inspections of the tailings storage facility and the reclaim pond. They record number of wildlife present and type, if readily identifiable. Phoenix has one cyanide-related Industrial Artificial Pond Permit with the Nevada Department of Wildlife. Under the provisions of this permit the operation is required to conduct mortality monitoring and report all wildlife mortalities regardless of cause of death. Some mortalities at the supernatant pond and reclaim pond have been reported since the initial certification audit. The root cause of these mortalities was mainly due to being stuck in the mud or from possible drowning. These mortalities were reported to the Nevada Department of Wildlife as required. No follow up testing was required by the Nevada Department of Wildlife for these mortalities. The auditors observed inspection records and reporting forms from the recertification period.

Phoenix does not have an active gold heap leach, and therefore the Code requirements for ponding and overspray are inapplicable.

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

in full compliance with


Phoenix is

in substantial compliance with

**Operations Practice 4.5**

not in compliance with

Phoenix Mine  
Name of Facility

  
Signature of Lead Auditor

February 3, 2012  
Date





## ICMC RECERTIFICATION SUMMARY REPORT

### Summarize the basis for this finding:

Phoenix is in FULL COMPLIANCE with Standard of Practice 4.5, requiring the operation implement measures to protect fish and wildlife from direct or indirect discharges of cyanide process solutions to surface water.

Standard of Practice 4.5 is inapplicable because Phoenix does not have direct or indirect discharges to surface waters. Phoenix operates with zero discharge of process solutions. No surface water bodies are present at or near the mine, with the closest water body located 15 miles to the southeast. The auditors observed no flowing watercourses or surface water bodies in the vicinity of the mine.

### Operations Practice 4.6: Implement measures designed to manage seepage from cyanide facilities to protect the beneficial uses of groundwater.

in full compliance with

Phoenix is

in substantial compliance with

Operations Practice 4.6

not in compliance with

### Summarize the basis for this finding:

Phoenix is in FULL COMPLIANCE with Standard of Practice 4.6, requiring the operation implement measures designed to manage seepage from cyanide facilities to protect the beneficial uses of groundwater.

The active cyanide facilities at Phoenix consist of the mill and related conveyance pipes, tanks and containments, the tailings delivery and reclaim water pipelines, the tailings storage facility, and the reclaim pond. The plant has adequate concrete spill containment to eliminate seepage. The tailings delivery pipelines are contained within a lined channel. The reclaim water pipelines are constructed of Tite-Liner® pipe, composed of an outer steel pipeline with a high-density polyethylene (HDPE) pipe insert. The outer pipeline contains monitoring valves to detect any water presence. Valves are inspected weekly by operators. The tailings storage facility is lined with 80-mil linear low-density polyethylene (LLDPE) geomembrane for Stages 1 through 3 and 80-mil HDPE for Stages 3 through 7. All stages were placed on compacted copper tailings or natural alluvium subgrade and overlain by 18 inches of granular alluvium cover. The reclaim pond is double-lined with 60-mil HDPE primary and secondary geomembrane. The pond has a leak detection system, consisting of an HDPE geonet layer placed between the primary and secondary liners and connected to leak collection sump. The sump is equipped with an automatic evacuation pump. Reclaim solution is returned to the mill. The auditors inspected these facilities during the site visit.

The auditors reviewed environmental monitoring data from the recertification period that showed that Phoenix generally had no detectable WAD cyanide (<0.010 mg/L) in groundwater at compliance points or downgradient of the operation. However, Phoenix had three isolated cases of WAD cyanide concentrations greater than the detection limit at well CM-24 during the recertification period, but these detected concentrations were below the Nevada Groundwater Standard for WAD cyanide of 0.2 mg/L for Primary and Secondary Drinking Water Standards. The operation is protective of the designated beneficial use of groundwater.

Phoenix does not use mill tailings as underground backfill.

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

in full compliance with

Phoenix is


in substantial compliance with

Operations Practice 4.7

not in compliance with

### Summarize the basis for this finding:

Phoenix Mine  
Name of Facility

  
Signature of Lead Auditor

February 3, 2012  
Date





## ICMC RECERTIFICATION SUMMARY REPORT

Phoenix is in FULL COMPLIANCE with Standard of Practice 4.7 requiring that the operation provide spill prevention or containment measures for process tanks and pipelines.

Phoenix has spill prevention and containment measures for the cyanide unloading and storage area, the carbon-in-pulp/leach area, the carbon circuit area that contains the intense cyanidation solution tank, and the tailings collection box. Phoenix has automated pumps within the containments to pump collected solutions into the process circuit. The containments are constructed of cast-in-place reinforced concrete with sufficient capacity to contain more than 110 percent of the largest tank. The auditors inspected these facilities, examined inspection records, and reviewed capacity calculations.

All tanks and pipelines are constructed of materials compatible with cyanide and high pH conditions. All pipelines have secondary containment, either as a pipe-in-pipe configuration or a pipe within a HDPE-lined containment. The auditors inspected these facilities.

Phoenix does not have any perennial or ephemeral surface water bodies that require special protection needs for pipelines.

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

in full compliance with

Phoenix is

in substantial compliance with

**Operations Practice 4.8**

not in compliance with

**Summarize the basis for this finding:**

Phoenix is in FULL COMPLIANCE with Standard of Practice 4.8 requiring that operations implement QA/QC procedures to confirm that cyanide facilities are constructed according to accepted engineering standards and specifications.

The cyanide facilities at Phoenix are largely unchanged from the initial certification audit, with the exception of two expansions of the tailings storage facility and improvements to the cyanide detoxification circuit. Phoenix implemented a QA/QC program during construction of the Stage 3 and Stage 4 expansions of the tailings storage facility completed during 2009 and 2011, respectively. Phoenix also implemented a QA/QC program during the 2008 construction of the earthworks and concrete components of the improvements to the cyanide detoxification circuit. The auditors inspected these facilities, and reviewed as-built drawings and construction reports.


The QA/QC documentation for the two expansions to the tailings storage facility included geotechnical results from laboratory and field testing that ensured the suitability of the soil materials used. Likewise, Phoenix conducted field and laboratory testing of the earthworks and concrete used in the improvements to the cyanide detoxification circuit to ensure the suitability of these materials. As-built drawings issued by the engineer of record in 2009 for these improvements support that appropriate materials were used for the tanks and appurtenances, and that they were installed as designed.

Phoenix has retained the QA/QC documents listed in the initial certification audit, as well as the QA/QC documents for the more recent expansions of the tailings storage facility and the improvements to the cyanide detoxification circuit. The auditors observed the retained documents.

Phoenix retained professional engineers licensed in the State of Nevada to conduct QA/QC work for the two expansions of the tailings storage facility and the improvements to the cyanide detoxification circuit. The auditors observed their stamps on the documents and drawings reviewed.

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

Phoenix Mine  
Name of Facility

  
Signature of Lead Auditor

February 3, 2012  
Date



## ICMC RECERTIFICATION SUMMARY REPORT

in full compliance with  
**Phoenix is**  in substantial compliance with **Operations Practice 4.9**  
 not in compliance with

**Summarize the basis for this finding:**


Phoenix is in FULL COMPLIANCE with Standard of Practice 4.9 requiring that operations implement monitoring programs to evaluate the effects of cyanide use on wildlife, surface and groundwater quality.

Phoenix has developed written monitoring procedures to evaluate the performance of the cyanide management systems on wildlife and groundwater quality. The monitoring programs have been prepared by qualified professionals and reviewed and approved by Nevada Department of Environmental Protection. Monitoring procedures specify how and where samples should be taken, sample labelling, field notes, sample preservation techniques, chain of custody procedures, shipping instructions, and cyanide species to be analyzed. The auditors reviewed the procedures and interviewed the sampling staff.

Phoenix conducts monitoring at frequencies adequate to characterize the groundwater and wildlife. Groundwater samples are collected, analyzed, and reported on a quarterly basis, as required by the Nevada Department of Environmental Protection. The wildlife monitoring is continuous while employees are outside on the property and during daily inspections. The auditors reviewed inspection forms, field sampling forms, and associated reports from the recertification period.

Phoenix does not monitor surface water because Phoenix operates with zero discharge of process solutions. There are no natural surface water bodies on the property or within close proximity.

Phoenix Mine  
Name of Facility

  
\_\_\_\_\_  
Signature of Lead Auditor

February 3, 2012  
Date



7.0 PRINCIPLE 5 – DECOMMISSIONING

7.1 Protect Communities and the Environment from Cyanide through Development and Implementation of Decommissioning Plans for Cyanide Facilities

Decommissioning

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

Phoenix is

[ ] in substantial compliance with

Decommissioning Practice 5.1

[ ] not in compliance with

Summarize the basis for this finding:

Phoenix is in FULL COMPLIANCE with Standard of Practice 5.1 requiring that the site plan and implement procedures for effective decommissioning of cyanide facilities to protect human health, wildlife and livestock.

Phoenix has developed written closure plans in compliance with State of Nevada regulations that include decommissioning of cyanide equipment and facilities. The Phoenix reclamation plan considers process fluid stabilization in tailings and ponds (including cyanide solutions); collection and control of seepage; detoxification and rinsing of equipment, and closure of ponds. Phoenix has developed an implementation schedule that considers both the order and duration of closure and decommissioning activities. Phoenix is required by State of Nevada regulations to review and update the reclamation plan every 3 years or when facilities are modified. Phoenix has reviewed and updated the plan every 3 years, as required, with the most recently submitted update in 2009. The auditors reviewed these plans and updates.

Decommissioning

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

[X] in full compliance with

Phoenix is

[ ] in substantial compliance with

Decommissioning Practice 5.2

[ ] not in compliance with

Summarize the basis for this finding:

Phoenix is in FULL COMPLIANCE with the Standard of Practice 5.2 requiring that the site establish an assurance mechanism capable of fully funding cyanide related decommissioning activities.

Phoenix has developed a cost estimate for full funding of third party implementation of closure and reclamation activities, including decommissioning of cyanide related facilities. Phoenix has established an approved financial surety with the U.S. Bureau of Reclamation, Nevada State Office, of approximately \$323 million for complete mine closure and reclamation, an amount that exceeds the approximate cost of \$36 million for decommissioning alone. Phoenix has reviewed and updated the reclamation plan and cost estimate three times since the original plan was prepared in 2003, which complies with State of Nevada requirements to update the plan at least every 3 years or when facilities change. The auditors reviewed the cost estimate spreadsheet and its updates, as well as a letter from regulators showing that the financial surety is in place.

Phoenix Mine
Name of Facility

[Signature]
Signature of Lead Auditor

February 3, 2012
Date





8.0 PRINCIPLE 6 – WORKER SAFETY

8.1 Protect Workers’ Health and Safety from Exposure to Cyanide

Worker Safety

Practice 6.1: Identify potential cyanide exposure scenarios and take measures as necessary to eliminated, reduce and control them.

in full compliance with

Phoenix is  in substantial compliance with Worker Safety Practice 6.1

not in compliance with

Summarize the basis for this finding:

Phoenix is in FULL COMPLIANCE with Standard of Practice 6.1 requiring that the site identify potential cyanide exposure scenarios and take measures as necessary to eliminate, reduce and control them.

Phoenix has developed procedures describing how cyanide-related tasks must be conducted to minimize worker exposure. There are at least 20 standard task or operating procedures dedicated to cyanide-related tasks, accompanied by a Health, Safety, and Loss Prevention Manual. There are also three plant operating manuals prepared by the plant’s designers that describe safe procedures. The auditors reviewed all of these procedures and manuals.

Phoenix has developed a standard operating procedure specifically for the use of personal protective equipment. Phoenix has developed a section in the Health, Safety, and Loss Prevention Manual that addresses inspection requirements. Phoenix conducts a thorough suite of inspections for all cyanide facilities and activities. The auditors observed completed inspections from the recertification period.

Phoenix uses a formal Change Management Procedure, accompanied by a Change Management Form, to evaluate the potential for process and operational changes to impact worker health and safety. The auditors reviewed a completed Change Management Form for a 2011 trial use of ammonium bisulfite for cyanide detoxification.

Phoenix allows worker input into health and safety procedures in at least five ways, and provided the auditors with an example where worker input was actively considered in developing a draft procedure. The five ways range from anonymous suggestion boxes and informal whiteboard lists to formal input to the Cintellate program.

Worker Safety

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

in full compliance with

Phoenix is  in substantial compliance with Worker Safety Practice 6.2

not in compliance with

Summarize the basis for this finding:

Phoenix is in FULL COMPLIANCE with Standard of Practice 6.2 requiring that the site operate and monitor cyanide facilities to protect worker health and safety and periodically evaluate the effectiveness of health and safety measures.

Phoenix has determined, based on its solution chemistry that the solution pH for limiting HCN gas formation is: 12.8 for 30 percent NaCN solution and a minimum of 9.5 throughout the rest of the operation. The

Phoenix Mine  
Name of Facility

Signature of Lead Auditor

February 3, 2012  
Date





## ICMC RECERTIFICATION SUMMARY REPORT

auditors reviewed output from the plant database that verified the targets were generally met throughout recertification period.

Phoenix has installed fixed HCN monitors to measure HCN gas concentrations at five locations at the plant. These fixed monitors are outfitted with visible and audible alarms, in addition to being connected to the control panels in the plant control room. Two alarm levels have been established: a low-level alarm at 4.7 parts per million (ppm) and a high-level alarm at 10 ppm. Low-level alarms require investigation and high-level alarms require evacuation. Phoenix also has 13 portable HCN gas meters. The auditors observed all of the fixed monitors and several of the portable monitors. The auditors reviewed output from the plant database that verified the low level was not exceeded throughout the recertification period.

Phoenix has identified five high risk areas, defined as areas with measured concentrations of HCN gas greater than 2 ppm. These high risk areas were established at the time of the initial certification audit, and are now supported by monthly surveys with portable HCN meters starting in 2010. Phoenix has implemented a program for personal health sampling. The auditors reviewed the laboratory data from samples collected during the recertification period that showed that no worker was exposed to more than 21 percent of the 8-hour limit of 4.7 ppm. Phoenix has also identified high risk activities requiring HCN gas monitoring and personal protective equipment (e.g., confined space entry).

Phoenix maintains, tests, and calibrates the pH meters, fixed HCN meters, and portable HCN meters on a monthly basis. The auditors reviewed records of these activities from the recertification period.

Phoenix has posted warning signs at the doors and entryways to the plant indicating that cyanide solutions may be present, eating and smoking are allowed in designated areas only, smoking is prohibited, and hydrogen cyanide alarms are set at yellow alert (for investigation) and red alert (for evacuation). Warning signs are also posted at the tailings reclaim pond. The auditors observed these signs during the site visit.


Phoenix has located shower/eyewash stations and fire extinguishers throughout the plant and at the cyanide offloading area. The extinguishers are the dry powder type. The auditors randomly tested some of these stations and observed the fire extinguishers during the site visit. These items are inspected monthly by the Health, Safety, and Loss Prevention staff, as evidenced by examples of completed inspections from the recertification period.

Phoenix has labelled tanks and pipelines at the plant with various types of labels indicating cyanide is present and various types of arrows showing the direction of flow. Phoenix has also marked the tailings slurry lines with cyanide labels and flow direction arrows. The tailings reclaim lines are labelled to a lesser degree, but given that the WAD cyanide concentrations are low (i.e., 5 to 15 mg/L), there is a lesser need for labelling. The auditors observed these labels during the site visit.

Phoenix makes Material Safety Data Sheets available to all staff in English via the mine intranet. A binder of the Material Safety Data Sheets is also available in the plant control room. The auditors observed that an operator could rapidly access the data sheet for cyanide on the mine intranet.

The Phoenix Emergency Response Plan and the Newmont Standard Operating Procedure for Accident and Incident Investigation detail the procedures and actions to be followed in the event of an accident or incident. No cyanide exposure incidents occurred during the recertification period. In lieu of cyanide exposure incident investigations, Phoenix provided examples of completed investigations into non-cyanide incidents that allowed the auditors to verify that the general program of incident investigation was implemented during the recertification period.

Phoenix Mine  
Name of Facility

  
Signature of Lead Auditor

February 3, 2012  
Date



Worker Safety

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

in full compliance with

Phoenix is

in substantial compliance with

Worker Safety Practice 6.3

not in compliance with

Summarize the basis for this finding:

Phoenix is in FULL COMPLIANCE with Standard of Practice 6.3 which requires that the site develop and implement emergency response plans and procedures to respond to worker exposure to cyanide.

Phoenix provides the necessary equipment for response to cyanide exposure and the communication means to coordinate their use. Phoenix provides water via the eyewashes and showers located throughout the plant and has located cyanide kits at the control room, the ER6 room, and the ambulance bay. Each kit contains oxygen and amyl nitrite. The ambulance also has sodium thiosulfate and sodium nitrite for use by doctors. The auditors observed these items during the site visit. Phoenix has established a mine-wide radio system for use during emergencies. All plant and tailings operators carry portable radios; the plant control room has a dedicated radio.

The Health, Safety, and Loss Prevention safety staff inspect the cyanide kits monthly. The auditors observed completed inspections from the recertification period. During the site visit, the auditors also observed that the amyl nitrite was within the required temperature range and was not expired.

Phoenix has prepared an Emergency Response Plan, one standard operating procedure, and three standard task procedures for responding to emergencies, including cyanide exposures. The auditors reviewed the plan and related procedures.

Phoenix has emergency equipment to respond to cyanide emergencies, including ambulances, fire trucks, and a Hazmat trailer. Phoenix has a trained Emergency Response Team with certifications as Emergency Medical Technician, First Responder, and Hazmat Technician. First Responders and Emergency Medical Technicians are available on all shifts. The auditors inspected the emergency equipment during the site visit and obtained copies of staff certifications.

The Emergency Response Plan describes how to dispatch the hospital ambulance or air evacuation to transport exposed workers to offsite medical facilities. In addition, Phoenix has developed a procedure specifically for how to rendezvous with the hospital ambulance. The auditors observed such a rendezvous (for a non-cyanide related incident) on the last day of the site visit.

Phoenix has determined that the Battle Mountain General Hospital has adequate equipment and staff to treat an exposed worker, and has established an agreement with this hospital that ensures they are aware of the potential to treat patients with cyanide exposure. The auditors reviewed correspondence between the mine and the hospital.

Phoenix conducted four mock drills during the recertification period. The scenarios included laboratory technician exposure to cyanide, MayDay procedures, an earthquake, and a spill of cyanide-bearing tailings outside of pipeline secondary containment. The auditors reviewed the post-drill forms.

Phoenix Mine  
Name of Facility

Signature of Lead Auditor

February 3, 2012  
Date







9.0 PRINCIPLE 7 – EMERGENCY RESPONSE

9.1 Protect Communities and the Environment through the Development of Emergency Response Strategies and Capabilities

Emergency Response

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

[X] in full compliance with

Phoenix is [ ] in substantial compliance with Emergency Response Practice 7.1

[ ] not in compliance with

Summarize the basis for this finding:

Phoenix is in FULL COMPLIANCE with Standard of Practice 7.1 which requires that the site prepare detailed emergency response plans for potential cyanide releases.

Phoenix has prepared an Emergency Response Plan, an operating plan, one standard operating procedure, and three standard task procedures for responding to cyanide releases. The Emergency Response Plan considers all reasonably foreseeable scenarios related to cyanide exposures and releases, including: hydrogen cyanide gas generation, transportation accidents, releases during unloading, fires/explosions, rupture of vessels and piping, overtopping of ponds, power outages, rapid seepage, destruct system failure, and impoundment failure. The cyanide producer (i.e., Cyanco) and transporter (i.e., TransWood) are responsible for spills and releases up to the time of offloading. However, Phoenix is prepared to provide the first response to transportation accidents on the mine site, pending contacting and arrival of Cyanco staff. The Emergency Response Plan addresses specific response actions, including evacuation, use of antidotes, release containment, and mitigation or cleanup. Releases from the site would be to adjacent soil only, as there is no surface water in the vicinity of the mine. The plan contains specific instructions on managing releases, including: safety and detection; tracing the source; controlling the source; emergency notification; securing the area; containing the release; recovering product; cleaning up; disposing of waste; confirming cleanup; replacing used supplies; and post-cleanup monitoring. The auditors reviewed these plans and procedures.

Emergency Response

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

[X] in full compliance with

Phoenix is [ ] in substantial compliance with Emergency Response Practice 7.2

[ ] not in compliance with

Summarize the basis for this finding:

Phoenix is in FULL COMPLIANCE with Standard of Practice 7.2 which requires that the site involve site personnel and stakeholders in the planning process.

Phoenix staff are involved in cyanide emergency response planning via plant safety meetings and site response team meetings. Phoenix staff are members of the Lander County Local Emergency Planning Commission, as well as the State of Nevada Emergency Response Commission, and regularly participate in meetings that include planning for cyanide emergencies. Phoenix has made business leaders and general public of the local community aware of potential risks associated with cyanide via community breakfasts, newsletters, health fairs, and tours. Phoenix has not designated a role for offsite responders in planning or responding to onsite cyanide emergencies. Phoenix has limited outside assistance with onsite emergencies to emergency medical services and fire emergencies. Onsite hazardous materials releases and exposures,

Phoenix Mine
Name of Facility

[Signature]
Signature of Lead Auditor

February 3, 2012
Date







including those related to cyanide, will be handled exclusively by the Phoenix Site Response Team without outside involvement. Although offsite agencies do not have a role in response to onsite cyanide emergencies, Phoenix nonetheless engages with them via membership of mine staff on the Lander County Local Emergency Planning Commission, which includes staff from the local hospital and fire department. The auditors observed agendas and attendee lists for both internal and external meetings held during the recertification period, and reviewed correspondence between the mine and Lander County Local Emergency Planning Commission.

**Emergency Response**

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

in full compliance with

**Phoenix is**  in substantial compliance with **Emergency Response Practice 7.3**

not in compliance with

**Summarize the basis for this finding:**

Phoenix is in FULL COMPLIANCE with Standard of Practice 7.3 which requires that the site designate appropriate personnel and commit necessary equipment and resources for emergency response.

The Emergency Response Plan defines the General Manager Operations as the staff member with authority to commit resources to implement the plan, with Area Managers as alternatives. An attachment to the plan lists the Site Response Team members and their contact information. A section in the plan lists the training courses required for membership on the Site Response Team. An attachment to the plan uses a flow chart to graphically illustrate the callout and notification procedures. The plan contains sections that describe the duties and responsibilities of the Emergency Response Coordinator, the Site Response Team Captain, and the Site Response Team members. The plan lists the locations of the emergency vehicles, equipment, and supplies and Phoenix inspects these items monthly. A section in the Emergency Response Plan describes the roles of outside entities. Phoenix is responsible for onsite response to cyanide incidents with the assistance of Cyanco. Phoenix may respond to offsite cyanide incidents if requested by the agency in charge, and if approved by Phoenix management. The auditors reviewed the plan and completed inspection forms from the recertification period.

The auditors reviewed letters that Phoenix sent to the local hospital and local emergency planning commission that confirm these entities are aware of their roles in the event of a cyanide emergency. Only Phoenix staff will respond to onsite cyanide incidents, and the Phoenix ambulance will meet the hospital ambulance at an offsite rendezvous point.

**Emergency Response**

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

in full compliance with

**Phoenix is**  in substantial compliance with **Emergency Response Practice 7.4**

not in compliance with

**Summarize the basis for this finding:**

Phoenix is in FULL COMPLIANCE with Standard of Practice 7.4 which requires that the site develop procedures for internal and external emergency notification and reporting.

The Emergency Response Plan contains a section with procedures for notifying management, agencies, providers, and medical facilities. Attachments to the plan contain a flow chart for the sequence of

Phoenix Mine  
Name of Facility

Signature of Lead Auditor

February 3, 2012  
Date





notifications and a table listing all contact information. The auditors reviewed the previous contact lists from 2009 and 2010 to verify that the 2011 contact list is current.

The Emergency Response Plan also contains a section that describes the involvement of the Newmont Rapid Response System in incidents. The Rapid Response System is designed to ensure that communications with the local communities, public, and media are carried out in accordance with legal and ethical requirements. The system uses a severity matrix that classifies the roles of site, regional, and corporate teams in communicating with the local communities, public, and media in the event of a cyanide incident. Each team member with a role is provided with a personalized "Profile Pack" that contains procedures and checklists for carrying out their assigned communications with the local communities, public, and media. The auditors reviewed the "Profile Pack" for the mine's external relations representative.

**Emergency Response**

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

in full compliance with

Phoenix is  in substantial compliance with **Emergency Response Practice 7.5**  
 not in compliance with

**Summarize the basis for this finding:**

Phoenix is in FULL COMPLIANCE with Standard of Practice 7.5 which requires that the site incorporate in response plans and remediation measures monitoring elements that account for the additional hazards of using cyanide treatment chemicals.

The Emergency Response Plan and the procedure for soil remediation describe specific measures for the likely release scenario, which is a release to soil, as there are no surface water bodies in the vicinity of the Phoenix Mine. The measures include recovery by pumping, absorbing, or excavating. Cyanide-contaminated materials are to be disposed at the primary crusher, tailings impoundment, or any active cyanide-bearing leach facility. Provision of an alternative drinking water supply is inapplicable as there are no communities, residences, or water supply infrastructure in the vicinity of the Phoenix Mine. Both the Emergency Response Plan and the procedure for soil remediation prohibit the use of hypochlorite solutions, ferrous sulphate, and hydrogen peroxide when spills may reach flowing water. The only flowing water is ephemeral runoff and there are no ponds, lakes or reservoirs within the vicinity of the Phoenix Mine. The procedure for soil remediation describes sampling procedures, measures to prevent cross contamination, sampling patterns, the minimum number of samples, sample handling and shipping, and laboratory analysis. The cleanup threshold is defined as less than 0.2 ppm WAD cyanide. The auditors reviewed the Emergency Response Plan and soil remediation procedure.

**Emergency Response**

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

in full compliance with

Phoenix is  in substantial compliance with **Emergency Response Practice 7.6**  
 not in compliance with

Phoenix Mine  
Name of Facility

Signature of Lead Auditor

February 3, 2012  
Date






**Summarize the basis for this finding:**

Phoenix is in FULL COMPLIANCE with Standard of Practice 7.6, which requires that the site periodically evaluate response procedures and capabilities and revise them as needed.

Phoenix reviews its Emergency Response Plan at least annually, and more often if required after incidents, drills, or audits. The auditors reviewed four updates of the plan during the recertification period. The Emergency Response Plan calls for annual drills and the auditors reviewed the post-drill forms for four drills conducted during the recertification period (i.e., December 2009, September 2010, March 2011, and December 2011). The March 2011 drill tested an updated MayDay procedure in the plan as a result of an actual (but non-cyanide related) incident.

Phoenix Mine  
Name of Facility

  
\_\_\_\_\_  
Signature of Lead Auditor

February 3, 2012  
Date



10.0 PRINCIPLE 8 – TRAINING

10.1 Train Workers and Emergency Response Personnel to Manage Cyanide in a Safe and Environmentally Protective Manner

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

in full compliance with

Phoenix is

in substantial compliance with

Training Practice 8.1

not in compliance with

Summarize the basis for this finding:

Phoenix is in FULL COMPLIANCE with Standard of Practice 8.1 which requires that the site train workers to understand the hazards associated with cyanide use.

All Phoenix staff are trained in cyanide hazard recognition as part of their new employee orientation. Staff assigned to the plant or tailings, where cyanide is an integral part of the operation, are trained on the safe use and handling of cyanide. Contractors are trained by their Phoenix sponsor. The Phoenix training uses a PowerPoint presentation from Cyanco entitled "Sodium Cyanide Safety", which the auditors viewed. Worker knowledge of cyanide hazards is confirmed with a test after the presentation. The presentation covers recognition of cyanide materials, poisoning symptoms, first aid procedures, and emergency response, among other topics. Phoenix provides annual refresher training on cyanide hazards using the same PowerPoint presentation and test as for the initial training. Phoenix retains the cyanide training records for the full term of employment for each staff. The auditors reviewed training records and post-training examinations from the recertification period, as well as interviewed staff, to verify that Phoenix provided the initial and refresher training.

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

in full compliance with

Phoenix is

in substantial compliance with

Training Practice 8.2

not in compliance with

Summarize the basis for this finding:

Phoenix is in FULL COMPLIANCE with Standard of Practice 8.2 which requires that the site train appropriate personnel to operate the facility according to systems and procedures that protect human health, the community and the environment.

Phoenix trains its staff to minimize the potential for cyanide exposures and releases by use of the Western Nevada Process Operations Technicians System. The task training is organized by process circuits and levels. Training topics related to cyanide exposures and releases are included in each circuit and level. Training methods include: on-the-job training; review of plant operating manuals; instruction in standard task and operating procedures; task observation by a competent person; and written exams. Training is tracked by a checklist that itemizes each topic and requires sign-off by the trainer. The trainer must be a staff member already qualified on the task or a shift supervisor. The shift supervisor and training coordinator approve the checklist when all training is complete. Only then can an employee perform the task unsupervised. Planned task observations are used to confirm the effectiveness of task training after the initial task training. These task observations review the standard operating and task procedures for the task, including cyanide safety where applicable. Phoenix retains training records for each employee throughout

Phoenix Mine  
Name of Facility

Signature of Lead Auditor

February 3, 2012  
Date





## ICMC RECERTIFICATION SUMMARY REPORT

the entire period of their employment at Phoenix. The training records include the date of training, the employee's name, the trainer's name, the topics covered, and exam results where applicable. The auditors reviewed the complete training records for a long-time staff and a relatively new staff, as well as randomly checked training records of other staff. The auditors also interviewed three staff to ensure they had received training before performing cyanide-related tasks.

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

in full compliance with

Phoenix is

in substantial compliance with

**Training Practice 8.3**

not in compliance with

**Summarize the basis for this finding:**

Phoenix is in FULL COMPLIANCE with Standard of Practice 8.3 which requires that the site train appropriate workers and personnel to respond to exposures and environmental releases of cyanide

Phoenix trains all plant staff in the procedures to be followed in the event of a cyanide release or exposure. This training is provided via the task training system, which includes a checklist elements related to cyanide releases and exposures. Phoenix also trains all plant staff to provide initial first aid and decontamination in the event of a cyanide release or exposure. This training is achieved by the Mine Safety and Health Administration training and the cyanide training with the Cyanco "Sodium Cyanide Safety" presentation. The auditors reviewed training records from the recertification period.

The Site Response Team, as led by the Emergency Response/Hazardous Materials Coordinator, is trained in the Emergency Response Plan and use of response equipment. The auditors reviewed training schedules from the recertification period, and records that showed that the Site Response Team specifically trained on the Emergency Response Plan in January 2011.


The Emergency Response Plan states that onsite assistance by local public sector response teams will be limited to emergency medical services and fire emergencies. The auditors observed correspondence to verify the local emergency planning commission has been so advised in writing and provided with a copy of the plan.

Phoenix provides annual refresher training for response to cyanide and exposures and releases. Phoenix conducts an annual refresher with the Cyanco presentation on "Sodium Cyanide Safety". The annual refreshers for the Mine Safety and Health Administration training also include a session on cyanide safety. The auditors observed examples of these training records from the recertification period.

Phoenix conducted four mock drills that covered both worker exposures and environmental releases during the recertification period. Phoenix used these mock drills to both evaluate and provide training in response procedures and equipment. Where training was found deficient, corrective actions were assigned and additional training was provided. The auditors reviewed the post-drill forms for these four mock drills.

Phoenix retains training records for site-specific training for each employee throughout the entire period of their employment at Phoenix. The site-specific training for all plant staff includes cyanide safety. Phoenix also retains training records for third party courses provided to the Site Response Team members, such as Hazmat Technician and Emergency Medical Technician. The auditors observed that the training records included the date of training, the employee's name, the trainer's name, the topics covered, and exam results when an exam was applicable.

Phoenix Mine  
Name of Facility

  
Signature of Lead Auditor

February 3, 2012  
Date



11.0 PRINCIPLE 9 – DIALOGUE

11.1 Engage in Public Consultation and Disclosure

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

in full compliance with

Phoenix is

in substantial compliance with

Dialogue Practice 9.1

not in compliance with

Summarize the basis for this finding:

Phoenix is in FULL COMPLIANCE with Standard of Practice 9.1 which requires that the site Provide stakeholders the opportunity to communicate issues of concern.

Stakeholders and the public may contact Phoenix via advertised phone numbers and e-mail addresses, as confirmed by the auditors with newspaper clippings and handouts from the recertification period. Phoenix hosts community breakfasts, mine tours, workshops, and a booth at a local health fair. Public meetings are held when required for new or renewing permits. Phoenix staff participate on various local committees, such as the Chamber of Commerce and the Lander County Local Emergency Planning Commission, thus allowing an opportunity for stakeholder input. Phoenix maintains an issues register to ensure stakeholder and public concerns are tracked and responded to appropriately. The auditors observed meeting sign-in sheets, tour logs, and the Phoenix issues register from the recertification period.

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

in full compliance with

Phoenix is

in substantial compliance with

Dialogue Practice 9.2

not in compliance with

Summarize the basis for this finding:

Phoenix is in FULL COMPLIANCE with Standard of Practice 9.2 which requires that the site initiate dialogue describing cyanide management procedures and actively address identified concerns.

Phoenix hosts community breakfasts, mine tours, workshops, and a booth at a local health fair where cyanide-related information is disseminated orally and via handouts and presentations, as verified by the auditors with sign-in sheets from the recertification period. Public meetings are held when required for new or renewing permits. Phoenix staff participate in teacher workshops sponsored twice per year by Newmont and the Nevada Mining Association, providing opportunities to disseminate information on gold mining and cyanide use. Phoenix staff participate on various local committees, such as the Chamber of Commerce and Lander County Local Emergency Planning Commission, thus allowing an opportunity to give presentations with cyanide-related information. The auditors reviewed notes from the commission meetings from the recertification period. Phoenix also distributes cyanide-related information via its series of articles "Newmont Notes" in two local newspapers, as verified by clippings from the newspapers from the recertification period.

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

in full compliance with

Phoenix is

in substantial compliance with

Dialogue Practice 9.3

not in compliance with

Phoenix Mine  
Name of Facility

Signature of Lead Auditor

February 3, 2012  
Date






### Summarize the basis for this finding:

Phoenix is in FULL COMPLIANCE with Standard of Practice 9.3 which requires that the site make appropriate operational and environmental information regarding cyanide available to stakeholders.

Phoenix has developed handouts, presentations, and videos that have been distributed to the public and stakeholders via meetings, tours, workshops, community breakfasts, and a website. In addition, fact sheets associated with permits are available from the Nevada Department of Environmental Protection. The majority of the local population is literate; nonetheless, Phoenix distributes a video on how gold is produced that provides information visually and orally. Information is also presented orally during tours and meetings. The auditors obtained copies of the handouts, PowerPoint presentation, and video, as well as the 2011 Fact Sheet associated with the Phoenix Water Pollution Control Permit.

Phoenix makes information available regarding releases and exposures via the Newmont website "Beyond the Mine". Although five minor spills were reported to regulatory authorities during the recertification period, these incidents have not been "significant cyanide incidents" subject to the notification requirements in Item 6 of the ICMC signatory application; they do not affect the compliance status under the Code. These incidents did not involve worker exposures to cyanide. Rather, these incidents have been minor releases of cyanide-bearing solutions to soil that have been reported to regulators. The auditors reviewed the Newmont website for records from 2009 and 2010, and reviewed Phoenix internal reports from 2011 that were not yet posted on the website at the time of the recertification audit.

Phoenix Mine  
Name of Facility

  
\_\_\_\_\_  
Signature of Lead Auditor

February 3, 2012  
Date





## Report Signature Page

GOLDER ASSOCIATES INC.

Kent R. Johnejack, P.E., CEA  
Lead Auditor and Gold Mining Technical Specialist

Ivon Aguinaga  
Gold Mining Technical Specialist

Mark A. Montoya  
Independent Technical Specialist for  
Standard of Practice 4.3 (Water Balance) and  
portions of Standard of Practice 4.8 (QA/QC)

Date: February 3, 2012

KJ/br

x:\tucson\projects\11proj\113-81788\final\final summary audit report phoenix mine.docx

At Golder Associates we strive to be the most respected global group of companies specialising in ground engineering and environmental services. Employee owned since our formation in 1960, we have created a unique culture with pride in ownership, resulting in long-term organisational stability. Golder professionals take the time to build an understanding of client needs and of the specific environments in which they operate. We continue to expand our technical capabilities and have experienced steady growth with employees now operating from offices located throughout Africa, Asia, Australasia, Europe, North America and South America.

Africa	+ 27 11 254 4800
Asia	+ 852 2562 3658
Australasia	+ 61 3 8862 3500
Europe	+ 356 21 42 30 20
North America	+ 1 800 275 3281
South America	+ 55 21 3095 9500

[solutions@golder.com](mailto:solutions@golder.com)  
[www.golder.com](http://www.golder.com)

**Golder Associates Inc.  
4730 North Oracle Road  
Suite 210  
Tucson, AZ USA 85705  
Tel: (520) 888-8818  
Fax: (520) 888-8817**

