INTERNATIONAL CYANIDE MANAGEMENT CODE
GOLD MINING OPERATION VERIFICATION AUDIT
GOLDCORP LOS FILOS MINE, MEXICO

SUMMARY AUDIT REPORT

Submitted to:

Desarrollos Mineros San Luis S.A. de C.V.
Unidad Minera Los Filos
Dom. Conocido Mezcala
Guerrero, C.P. 40191, Mexico

and

International Cyanide Management Institute
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Washington, D.C. 20006

Submitted by:

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August 20, 2010 063-2129.0013
Name of Project: Los Filos Mine

Project Owner / Operator: Desarrollos Mineros San Luis, a wholly owned subsidiary of Goldcorp Inc.

Name of Responsible Manager: Tomás Iturriaga, General Manager

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Audit Dates: March 15-18, 2010

Auditors: Pamela Stella, Lead Auditor and Gold Mining Technical Expert Auditor
G. Ivón Aguinaga, Gold Mining Technical Expert Auditor
Richard Frechette, P.E., Third Party Auditor (Standard of Practice 4.8)

Location and Description of Operation

The Goldcorp Los Filos Mine is located outside the town of Mezcala, Guerrero, Mexico between Mexico City and Acapulco. The elevation at the site is approximately 1,350 meters above mean sea level. Access is by paved roads, Iguala is the closest city, and the Cuernavaca is the closest major city. The area is characterized by distinct dry and wet seasons. Climate conditions during the wet season (June through October) are hot and humid. Mean annual total precipitation is 739 mm. Pan evaporation is 1,583 mm per year. Earthquake Forces based on the UBC requirements are for Seismic Zone 4.

On November 2003, Wheaton River Mineral Ltd., a Minas de San Luis subsidiary, acquired Los Filos project and between April and May of 2005 acquired a new ore deposit named El Bermejal. During these months Wheaton River Mineral Ltd., incorporated to Goldcorp Inc. Desarrollos Mineros San Luis S.A. de C.V a company indirectly wholly owned by the Goldcorp Inc. (DMSL) operates the Los Filos Mine (Los Filos) located in mountainous terrain, in the State of Guerrero, Mexico.

The mine has been in commercial operation since 2008. In 2004 Los Filos started the environmental permits first submitted an environmental impact assessment and land use change for construction of 115 Kilovolt transmission line, main power substation, main road rehabilitation and water supply line to Direcccion General de Impacto y Riesgo Ambiental (DGIRA) de la Secretaria de Medio Ambiente y Recursos Naturales (SEMARNAT). In 2005, Los Filos requested a permit for exploitation and ore process through a heap leach, process ponds, and ADR plant to DGIRA. In June 2005, Los Filos acquired the El Bermejal ore body and requested a permit for El Bermejal exploitation and the process and ancillary area extension. Los Filos has been operating since that time under the terms of SEMARNAT with the permits Lineal Services supply in November 2004 with No. S.G.P.A./DGIRA/DEI/2917.04. The Los Filos mine has been operating since May 2005 with permit...

The authorization of the environmental operation license named Licencia Ambiental Unica (LAU) is based upon the approval of an environmental impact assessment, an environmental risk study, water concession, and land use change authorizations. The LAU was granted by SEMARNAT under permit 12-75-LU-01-2009.

Los Filos mine consist in two open pits, multiple waste rock stockpiles, one gold cyanide heap leach facilities including process solution ponds (two pregnant solution ponds and one recirculation solution ponds), a single lined storm water pond, a leach recirculation system, carbon columns system, one liquid cyanide storage area, a crushing area, office buildings, water supply well, access and haul roads, and storm water control structures. Los Filos has different options on how to handle water between the process solution ponds. For example if water is accumulated in the stormwater pond, then Los Filos will send the water to the recirculation pond. The water will be neutralized in the neutralization tanks and then the neutralized water will be sent to the stormwater pond in order to maintain water level in the recirculation pond low at all times. The neutralization process destroys free cyanide in the barren solution to below 4 mg/l. In 2009, the Los Filos operation employed approximately 1,597 people and operates year round, 24 hours per day.

Los Filos permitted heap leach facility currently consist of approximately 270.4 hectares for the heap leach and 17.46 hectares for the process ponds. The cyanide related facilities include addition of active leach cells, cessation of leaching on some cells and addition of a cyanide offload and storage area. The heap leach cells are stacked with run-of-mine ore, which is hauled to one of the active heap leach cells and truck dumped in 5 meters lifts. Once a lift or portion of a lift is complete, the surface is then cross-ripped to enhance solution percolation. Solution distribution lines are placed on top of the ore and barren and/or recirculated cyanide solution is applied using either drip emitter or sprays at a rate of up to 12 liter per hour per square meter. The heap leach facilities consist of piping and pumps, a pH adjustment system, cyanide addition systems, an anti-scalant solution system and a solution processing facility.

The heap leach pads are constructed on engineered foundations with HDPE liners for containment of solution. Dilute cyanide solutions are applied to the run-of-mine and crusher ore cells and collected in two double-liner internal pregnant ponds. The pregnant ponds are filled with crushed ore and located along the central western edge of the heap leach facility. The process ponds and carbon columns are enclosed with high fencing to prevent wildlife and livestock access. The pregnant ponds are filled with crushed ore that prevent bird access. Pregnant solution is conveyed to carbon columns for gold adsorption. Loaded carbon is then stripped using a hot pressure alkaline solution. Metals are recovered from the hot alkaline solution using electrowinning system. After the metal-bearing sludge is collected in the electrowinning process it is dried and placed an induction furnace, the final product is doré bars.

The cyanide storage area consists of a cyanide-mixing tank and a storage tank. Cyanide is distributed (pumped) from the storage tank to the leach pad, the carbon column circuit, and the elution column. The pumped cyanide solution to the leach pad is mixed in line with either solution from the barren tank or solution from the recirculation tank. The cyanide offload and storage areas have been designed and constructed in accordance with sound and accepted engineering practices.
Los Filos receives solid sodium cyanide from E.I. DuPont De Nemours & Co., Inc. (DuPont) a signatory company to the International Cyanide Management Code (Code) and certified as compliant with the Code. Cyanide is delivered to the site in specially engineered isocontainer trucks. Solid sodium cyanide and the sodium hydroxide is mixed inside the isocontainer with process water and then pumped to the cyanide-mixing tank.

Environmental and wildlife monitoring associated with the cyanide facilities is conducted daily.

Los Filos has identified potential cyanide exposure scenarios and developed plans and standard operating procedures (SOPs) to eliminate, reduce and control exposure to cyanide. Operating plans and individual task specific SOPs provide details for safe storage, handling, and distribution of cyanide; safe operation of cyanide equipment; personal protective equipment (PPE) requirements; and inspection requirements. The cyanide storage tanks are within concrete containments. The tanks are located outdoors and have appropriate ventilation and hydrogen cyanide (HCN) monitoring, and high-level alarms to prevent overfilling. Los Filos stores and manages cyanide in engineered tanks, pipelines, concrete containments, reagent storage and cyanide neutralization process under appropriate quality control and quality assurance (QA/QC) programs. All pipelines are labeled to identify the content and the flow directions are marked.

Los Filos employees are trained in cyanide hazards and first aid, emergency response and specific operational tasks. Los Filos has a perimeter fencing around cyanide related facilities to prevent wildlife, livestock, and unauthorized personnel access to the property. Los Filos conducts inspection and preventive maintenance programs to assure that all cyanide equipment and facilities are functioning as designed and to monitor process solutions. Los Filos has developed a comprehensive closure plan to complete the appropriate management of cyanide solutions and solids, and the decontamination of cyanide tanks, pipelines, processing equipment and structural components associated with the cyanide process at the cessation of operations. Los Filos has established self-guarantee as the mechanism to cover the estimated costs for closure and reclamation.

Los Filos has an emergency response team that is trained to respond to cyanide spills and decontamination, and worker exposures to cyanide. Los Filos provides information on the onsite use and management of cyanide to communities, general public, and other stakeholders in written format and oral form. Los Filos also provides opportunities for stakeholders to communicate issues of concern regarding cyanide use and management at the mine through Goldcorp’s corporate website, community sessions, and others.
SIGNATURES

This Gold Mining Verification Audit Report presents the detailed findings of our International Cyanide Management Code audit of the Los Filos Mine located in Mexico. The audit was conducted according to the IMCI Gold Mining Verification Protocol dated October 2009.

Respectively submitted by:

Pamela J. Stella, P.G., CEA
Lead Auditor and Gold Mining Technical Expert Auditor

G. Ivón Aguinaga
Gold Mining Technical Expert Auditor

☒ in full compliance with

The operation is ☐ in substantial compliance with All Code Principles
☐ not in compliance with

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Audit Team Leader: Pamela J. Stella, CEA
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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.

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

**Basis for Audit Finding:** Los Filos has committed to only purchase cyanide from a producer, which is compliant with the International Cyanide Management Code (ICMC). Los Filos has Sodium Cyanide supply contracts with E.I. DuPont De Nemours & Co., Inc. (DuPont). DuPont is signatory to the ICMC and has provided third-party independent Audit Summary Reports confirming full compliance with the ICMC’s Cyanide Production Principles and Standards of Practice. DuPont was re-certified in full compliance with the ICMC on December 1, 2009.

2. TRANSPORTATION:  
**Protect communities and the environment during cyanide transport.**

*Standard of Practice 2.1:* Establish clear lines of responsibility for safety, security, release prevention, training and emergency response in written agreements with producers, distributors, and transporters.

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

**Basis for Audit Finding:** Los Filos has a Sodium Cyanide supply contract with DuPont, which specifies that the operation takes ownership of the cyanide at the time of delivery into the cyanide storage tank at the mine. The contract between Los Filos and DuPont specifically identifies the ICMC certification requirements as a provision. DuPont loads Flo-bins at its Memphis, Tennessee manufacturing plant into inter-modal cargo containers and seals the containers with a serial number tag that is only removed at the DuPont warehouse in San Luis Potosi. Canadian National Railroad (CN) transports the railcars from the Memphis plant to the Union Pacific Railroad (UP). The Canadian National Railway (CN) takes custody of the rail boxcars at the Memphis plant and moves them to the railhead in Memphis where they are transferred to the Union Pacific Railroad (UP). Cyanide is rail shipped in Flo-bins inside of intermodal containers from DuPont’s Memphis plant to DuPont’s interim storage facility in San Luis Potosi, Mexico. The transporters in the supply chain include: Canadian National Railway, Union Pacific Railroad, Ferrocarril Mexicano S.A. de C.V. (Ferromex), Kansas City Southern de Mexico S.A. de C.V. (KCSM) and Tansportes Especializados Segutal S.A. de C.V. (Segutal). At the DuPont interim storage facility in San Luis Potosi, the cyanide is then trans-loaded from the Flo-bins into isocontainer tanks for delivery to Los Filos. Segutal is the local transporter in Mexico that is hired by DuPont to pick up the isocontainer tanks at the warehouse and transport them to Los Filos. DuPont states in their letter to Goldcorp that all the transporters have
had a due diligence audit completed by an ICMI approved auditor and found to be in Full Compliance with the Cyanide Code. The summary audit reports were reviewed.

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

The operation is

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

Basis for Audit Finding: DuPont by contract is solely responsible for the production and transport of cyanide to the delivery point at Los Filos. DuPont is a signatory producer to the ICMC. DuPont has certified the entire transportation supply chain through due diligence audits as compliant with ICMC. The DuPont supply chain from the manufacturing facility in Memphis, Tennessee as it related to interim storage, due diligence of the rail transport, and the road transportation segment from the San Luis interim storage to the Los Filos mine. The ICMC Summary Audit and Due Diligence reports prepared by Management System Solutions (May 10, 2007; May 18, 2007; April 20, 2007; and April 16, 17, and 20, 2007), an independent third-party, for the supply chain from Memphis, Tennessee indicate appropriate due diligence by DuPont and full compliance with ICMC by the rail and overland by truck to Los Filos. Los Filos has copies of the due diligence reports for each of the individual transporters for the transportation of sodium cyanide from the manufacturing and packaging facilities in Memphis, Tennessee to the Los Filos Mine.

The entire supply chain from DuPont’s manufacturing plant in Memphis, Tennessee to delivery to the Los Filos offload area on site has been audited within the past three years by independent third party auditors. The reports state that “management practices were found to be conformant and appropriate for assuring that sodium cyanide is transported in accordance with the principles of the Cyanide Code Transportation Protocol.” The lead auditor of the transporter meets the ICMI’s auditor criteria for cyanide transportation.

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

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

The operation is

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

Basis for Audit Finding: The cyanide offload and storage areas have been designed and constructed in accordance with sound and accepted engineering practices as documented in construction as-built reports. The cyanide offload and storage facility quality control and assurance procedures and documentation include an as-built report noting foundation compaction and concrete reinforcement.
and verification of piping and tankage materials. The cyanide offloading and storage tanks are located outside and provide appropriate ventilation. The cyanide offloading and storage area is within concrete containment to contain releases and precipitation that may contact cyanide. The containment area is constructed for spill prevention and the containments sized to contain volumes greater than the single largest tank. The cyanide offload and storage areas are located away from surface waters. If there was a release outside of secondary containment at these areas, it would gravity drain to the recirculation pond. Los Filos has a security guard checkpoint to access all cyanide areas. There is a hydrogen cyanide gas fixed monitor and alarm at the mixing area. The delivery of cyanide is in specially engineered isocontainer trucks.

The cyanide mixing and storage tanks each have automatic ultrasonic level indicators and high-level alarms, which prevent the overfilling of the tanks. Secondary containments for cyanide storage and mixing tanks are constructed of materials that provide a competent barrier to leakage. Cyanide is stored separately from incompatible materials such as acids, strong oxidizers, and explosives and apart from foods, animal feeds, and tobacco products with appropriate barriers that will prevent mixing.

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

The operation is in full compliance with

Standard of Practice 3.2

Basis for Audit Finding: Los Filos has developed and implemented written Standard Operating Procedures (SOPs) to prevent exposure and releases of cyanide during unloading, storage, and application. Los Filos has developed a procedure that provides a comprehensive, step by step explanation of the operation of the control panel, all switches, valves (manual and automatic), pumps and couplings and emergency shut offs involved in the unloading of cyanide from isocontainers. The procedure also includes pre-offload inspection of the offload and cyanide storage areas and required Personal Protective Equipment for offload. Observation by an operator is required during the hook up and the start of the unload process, and then during the disconnection of the tanker conveyance hoses. Los Filos has a video camera that monitors the offload of the cyanide. A Paramedic observes the entire offload. Los Filos uses only the cyanide isocontainer trucks and there are no empty cyanide containers that require disposal.
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.

The operation is

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

Basis for Audit Finding: Los Filos has developed and implemented operator task-specific SOPs that address protection of human health and the environment for the operation of cyanide heap leach processing. These SOPs were found to have adequate contingency planning, routine inspections, and a preventive maintenance program. SOPs address all the cyanide management tasks such as offloading, handling, and storage of cyanide; operation of the carbon-in-column systems; and cyanide circulation pumps. Contingency planning documents have been developed and implemented to support the process pond management and solution inventory to address power failure, as well as extreme precipitation management. Los Filos has a backup generator system to ensure that essential process equipment and systems operate. Los Filos has inspections that include regular testing of the backup power generator. Los Filos uses inspection forms for identifying, completing, and documenting all preventive maintenance activities.

The Los Filos Operating Plans provide details of the project plans and the applicable regulatory requirements. This includes the requirement for 2-meter freeboard within all ponds. The stormwater pond was designed to operate as a water storage reserve with the capacity to contain the 100-year, 24-hour interval storm event with a 2-meter freeboard.

Los Filos has a change management procedure that is to be used when an operational or process change/modification is proposed. The procedure considers the involvement of process, environmental and safety personnel, if required, in the assessment of the proposed changes.

Los Filos has plans and procedures that describe the standard practices necessary for the safe and environmentally sound operation of the facility including inspections and preventive maintenance activities. Los Filos has a contingency plan for cyanide management in situations where there is an upset in a facility’s water balance, when inspections or monitoring identifies a problem, and when a temporary closure or cessation of operations may be necessary.

Los Filos inspects cyanide facilities on an established frequency sufficient to assure and document that they are functioning within design parameters. Inspections include a visual inspection of all tanks holding liquid Sodium Cyanide for integrity and signs of corrosion, cyanide containments (presence of fluids and available capacity), leak detection at the ponds, solution collection systems at leach pads, pipelines, pumps, and valves for deterioration and leakage, process ponds and heap leach lined areas. The inspections are documented, including the date of the inspection, the name of the inspector, any observed deficiencies, and the nature and date of corrective actions. Los Filos retains the inspection records. Los Filos has a preventive maintenance program that assures the continuous and safe operation of the equipment for cyanide management.
Standard of Practice 4.2: Introduce management and operating systems to minimize cyanide use, thereby limiting concentrations of cyanide in mill tailings.

The operation is ✗ in full compliance with Standard of Practice 4.2

The operation is □ in substantial compliance with

The operation is □ not in compliance with

Basis for Audit Finding: Los Filos is a heap leach operation and does not include milling operations.

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

The operation is ✗ in full compliance with Standard of Practice 4.3

The operation is □ in substantial compliance with

The operation is □ not in compliance with

Basis for Audit Finding: Los Filos has developed a comprehensive, probabilistic water balance that meets the requirements of a comprehensive water management program. Los Filos has developed a comprehensive, probabilistic water balance for the heap leach facilities, conveyance ditches, and process ponds that is tracked and updated with actual process values on a daily basis. The model allows the user to define initial and operating conditions within the Los Filos Mine system and simulate the projected performance of the mine water system over a given time period. The water balance is set up to evaluate other potential water balance scenarios with site-specific climatic data and a variable climatic data set. The Los Filos water balance has been developed to evaluate the impact of extreme climatic conditions with the design storm event and power outage. The model can evaluate differing management strategies for solution inventory reduction including elimination of make-up water addition, moving solution application to inactive portions, and/or increase use of sprays.

The Los Filos ponds are designed and operated with adequate freeboard above the maximum design storage capacity determined to be necessary from water balance calculations. Ponds are inspected daily and surveys of the pond levels are completed daily. Daily operator logs and inspection forms were reviewed. Los Filos measures precipitation and incorporates these results into the water balance and operational planning to prevent potential overtopping. The operating practices are routinely adjusted to respond to water balance conditions as identified in the pond levels during daily inspections and monitoring.

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

The operation is ✗ in full compliance with Standard of Practice 4.4

The operation is □ in substantial compliance with

The operation is □ not in compliance with

Basis for Audit Finding: Los Filos has three process ponds (two pregnant ponds and one recirculation) that contain cyanide solutions. Los Filos has a stormwater pond that does not
contain cyanide or process solution. Los Filos maintains the WAD cyanide concentrations below 50 mg/L in open waters of all process ponds including the recirculation pond. The north pregnant pond and south pregnant pond are covered with gravel. All other process solutions are in tanks and pipelines located within a fenced and guarded area.

Los Filos has developed and implemented programs to prevent and control ponding of solution on the surface of the heaps during application and to prevent overspraying of the lined areas. Wildlife mortality inspections are conducted daily. Los Filos has been successful in preventing wildlife mortality related to cyanide in the open water ponds by maintaining WAD cyanide concentrations below 50 mg/L. Incident and wildlife monitoring reports were reviewed.

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

The operation is **X** in full compliance with Standard of Practice 4.5

**Basis for Audit Finding:** Los Filos is designed and operated for zero-discharge of process fluids. Los Filos does not discharge process water to surface waters. There are no direct or indirect discharges to surface waters. Surface water monitoring data, inspection forms, and water balances were reviewed. Operation performance history, design criteria, and the project water balance indicate that the facility operation is consistent with the zero-discharge requirements. Monitoring information indicates no impact to surface water quality has occurred from the heap leach operations. Spill prevention and emergency response plans have been developed to comply with the zero-discharge operating requirements.

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

The operation is **X** in full compliance with Standard of Practice 4.6

**Basis for Audit Finding:** The regional groundwater beneficial use has been classified as a drinking water source. Accordingly, the project construction and operation include a number of seepage control technologies such as composite liner systems below the heap leach pads consisting of compacted low-permeability soil liner overlain by geomembrane liners, double geomembrane liners with leak detection and leak collection systems underneath the process ponds, and concrete containments in process areas to protect the beneficial water use. Los Filos implements inspection and monitoring programs to ensure water management and leak detection systems are functioning properly, and that water quality is being protected. The groundwater quality monitoring data indicate that the beneficial groundwater uses have been protected. Mexico has established water quality standards that are applicable to groundwater and drinking water. The free cyanide concentration limitation for ambient water supply groundwater is 0.2 mg/l.
**Standard of Practice 4.7:** Provide spill prevention or containment measures for process tanks and pipelines.

- **The operation is** in full compliance with
- **not in compliance with**

**Basis for Audit Finding:** Los Filos has spill prevention and containment measures provided for all cyanide offloading, storage, handling, and process solution tanks. Containment includes secondary curbed concrete containments for the cyanide storage area and for all the process areas. Other secondary containments include pipe-in-pipe. The secondary containments in the cyanide offload, storage areas and all process areas have been designed to contain at least 110% of the largest tank leakage and a design storm event. Los Filos has automated the collection sumps in the secondary containment areas to automatically pump any cyanide solution back into the process circuit. The pipelines for conveying solution from the recirculation pond to the heap leach facilities are HDPE and are placed within lined ditches that drain back to the process ponds. Pregnant solution pipelines are HDPE and are placed within lined ditches. Secondary containment in the process area has SOPs for management of tank leakage that involves solution pumping, and protocols for solution transfer. SOPs have been developed to address management of spill response and clean-up within the containments. Review of the operation indicates that all tanks, piping and containments are constructed of materials appropriate for handling high pH cyanide solutions. Los Filos has located facilities in areas that do not pose any undue risks to surface water that would require special protection.

**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.

- **The operation is** in full compliance with
- **in substantial compliance with**
- **not in compliance with**

**Basis for Audit Finding:** Los Filos has implemented quality control/quality assurance (QA/QC) programs during construction of all cyanide facilities, including cyanide offloading, storage, handling facilities, and heap leach pads. The CQA report includes a broad range of construction elements including, but not limited to, subgrade preparation, structural fill, clay layer fill and preparation for liner, as well as a host of observations and procedures for geomembrane material inspection, installation and seaming. The quality control and quality assurance program also addressed the suitability of materials and adequacy of soil compaction for earthworks such as tank foundations and installation of synthetic membrane liners. The project construction has been verified by qualified engineering companies and includes detailed QA/QC data collection and documentation. The QA/QC documents indicate that the construction was completed according to engineering standards and specifications. Los Filos retains all QA/QC information.
Standard of Practice 4.9: Implement monitoring programs to evaluate the effects of cyanide use on wildlife surface and ground water quality.

The operation is ☒ in full compliance with ☐ in substantial compliance with ☐ not in compliance with

**Basis for Audit Finding:** Los Filos has environmental monitoring programs developed to evaluate the performance of all cyanide management systems on wildlife, surface, and ground water quality. The environmental programs have been reviewed and approved by qualified professionals and implemented by qualified personnel and include all appropriate sampling and analysis documentation. The programs specify how and where samples should be taken, sample preservation techniques, chain of custody procedures and cyanide species to be determined. Sampling conditions and procedures are documented in writing. Los Filos does inspect for and record wildlife and livestock mortalities. Los Filos’s monitoring program has been designed to adequately characterize the conditions for a variety of media and to identify changes in a timely fashion.

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.

The operation is ☒ in full compliance with ☐ in substantial compliance with ☐ not in compliance with

**Basis for Audit Finding:** Los Filos has developed a written closure plan and cost estimate to address decommissioning of all cyanide equipment, pipelines, and facilities. The cyanide decommissioning implementation schedule addresses the cyanide solution reduction and management for the heap leach facilities and decommissioning of the cyanide equipment, pipelines, process ponds, and conveyance structures. Financial accounting procedures require that mine closure liabilities be externally re-evaluated every year and Goldcorp internally requires the closure plan to be updated every year as part of its Asset Retirement Obligation (ARO) Policy.

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

The operation is ☒ in full compliance with ☐ in substantial compliance with ☐ not in compliance with

**Basis for Audit Finding:** The Los Filos internal cyanide facility decommissioning cost estimate is an estimate that fully funds completion of the closure of the cyanide-related facilities and activities by a contractor. The cost estimates are updated at least every five years. Los Filos has established self-
guarantee as the mechanism to cover the estimated costs for closure and reclamation. Goldcorp provided documentation from a Chartered Accountant verifying Goldcorp Inc.’s compliance for a self-guarantee mechanism to cover the estimated costs for cyanide-related decommissioning activities.

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, and control them.

The operation is ☑ in full compliance with
☐ in substantial compliance with
☐ not in compliance with

Standard of Practice 6.1

Basis for Audit Finding: Los Filos has developed written Standard Operating Procedures (SOPs) and plans that describe the management and operation of the cyanide facilities. Operating plans and individual task-specific SOPs provide details for safe operation of cyanide equipment, PPE requirements, and inspection requirements. The documents will be updated as needed, as the process will be revised to address process changes. Los Filos also has signage for PPE requirements at the areas where cyanide is used. Pre-work inspections are conducted prior to a cyanide offload to verify the use of the appropriate PPE and check tank levels, safety showers, and eyewash stations, and the presence of the cyanide antidote. Los Filos also conducts bi-weekly inspections of the process areas and weekly inspections of the leach pad areas. Los Filos solicits worker input in developing and evaluating health and safety procedures described in its SOPs via direct communication to supervisors or during daily safety meetings conducted at the process areas.

Los Filos has developed a “Procedure to Make Changes and Modifications to the Operating Method of the Plant” to be used when an operational or process change/modification is proposed. The procedure considers the involvement of process, environmental and safety personnel, if required, in the assessment of the proposed changes. Procedures to communicate an approved operational changes/modification to workers are also described in the change management procedure. An example of a change management analysis was reviewed to verify compliance.

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.

The operation is ☑ in full compliance with
☐ in substantial compliance with
☐ not in compliance with

Standard of Practice 6.2

Basis for Audit Finding: The operation has determined the appropriate pH for limiting the evolution of hydrogen cyanide gas (HCN). pH is monitored and maintained to prevent the formation of HCN as recommended in the operating plans. Los Filos conducted a risk assessment to identify the areas of potential worker exposure to cyanide and evaluate the need of installing fixed HCN monitors. Los Filos has three fixed HCN monitors, one in the cyanide offloading area and two in the Adsorption Desorption Recovery (ADR) plant. In addition, operators use handheld HCN meters to conduct maintenance work, confined space related work and other cyanide tasks. HCN
alarms are set up at 4.7 ppm (preventive) and 10 ppm (evacuation). HCN monitors are maintained, calibrated, and inspected as recommended by the manufacturer. Warning signs are in areas where cyanide is used to alert workers that cyanide is present, that smoking, open flames, eating and drinking are not allowed and that the necessary cyanide-specific PPE must be worn. Pipes carrying cyanide are marked and the direction of flow is indicated with arrows on the pipe. Signage for confined spaces at the tank entry points has also been placed.

Shower and eyewash stations are located at the cyanide offloading areas and throughout the process areas. Shower and eyewash stations are inspected biweekly and prior to an offloading event. Fire extinguishers are non-acidic sodium bicarbonate and are inspected on a regular basis. Inspection records of fire extinguishers and showers were reviewed. First aid instructions for cyanide exposure, including MSDS, are in each first aid kit located in areas where reagent grade cyanide is handled. The MSDSs are in Spanish, the language of the workforce. Los Filos has developed a procedure for “Incident and Accident Investigation.” The procedure includes investigation procedures, reporting procedures, lines of responsibility during and after the incident, and follow-up procedures to check the status of corrective actions identified after an incident.

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

**The operation is**

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

**Basis for Audit Finding:** Cyanide antidote kits are located in the cyanide offloading area, ADR plant, leach pad area and medical facility. Cyanide antidote kits include oxygen resuscitator, amyl nitrite, sodium thiosulfate, sodium nitrite, activated carbon and first aid kit. An automated external defibrillator (AED) is located in the medical facility and a resuscitator in the ambulance. Cyanide antidote kits are stored at the manufacturer’s recommended temperature range and expiration date. Medical personnel inspect cyanide antidote kits weekly. Operators carry a radio when they are performing their tasks to notify their supervisor or the control room, when required or in the event of an emergency. Los Filos has established a radio channel to be used for emergency only or to contact the medical unit/paramedics.

Los Filos has developed written ER procedures for cyanide exposures. These plans include the Sodium Cyanide Emergency Response Plan (ERP) and task specific SOPs. Los Filos has on-site capabilities to provide first aid or medical assistance to workers exposed to cyanide. Los Filos has on-site personnel who are trained by DuPont in first aid and medical treatment for cyanide exposures (e.g., on-site doctors, nurses, and brigade members). Los Filos has at least one doctor and one brigade member per shift. In addition, Los Filos has an agreement with the “Royal Care Hospital” in Iguala, the Mexican Social Security Institute (IMSS) of Iguala and the IMSS of Chilpancingo to treat workers exposed to cyanide. Letters from these three hospitals certifying the arrangement with Los Filos and stating that the hospitals have adequate, qualified staff, equipment and expertise to respond to cyanide exposures were reviewed. Los Filos has developed procedures to transport workers exposed to cyanide to any of the three hospitals. Los Filos conducts annual mock drills based on likely cyanide release/exposure scenarios to test the response procedure and incorporate lessons learned from the mock drills into its response planning.
7. EMERGENCY RESPONSE: Protect communities and the environment through the development of emergency response strategies and capabilities.

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

The operation is in full compliance with Standard of Practice 7.1

**Basis for Audit Finding:** Los Filos has developed several plans and SOPs that address emergency response to potential accidental releases of cyanide. Los Filos plans contain procedures for potential scenarios such as: 1) cyanide intoxication; 2) on-site accidents during cyanide transportation; 3) releases during offloading and transfer of the cyanide to the mixing and storage tanks; 4) cyanide related fire and explosion; 5) pipe, valve or tank ruptures; 6) power outage and pump failures; 7) overtopping of ponds; 8) uncontrolled seepage; 9) failure of the leach pad facilities; 10) failure of the cyanide neutralization system; 11) cyanide spill control and clean-up; and 12) decontamination and emergency evacuation.

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

The operation is in full compliance with Standard of Practice 7.2

**Basis for Audit Finding:** Los Filos solicits the input of its workforce and local response agencies in the emergency response planning through safety meetings and mock drills, respectively. Los Filos has 26 brigade members, who are from the surrounding communities (e.g., Mazapa, Carrizalillo, and Mezcala). Brigade members have received training in emergency communication and evacuation procedures. Los Filos has established communication channels with the communities located around the mine site through community meetings and through the brigade members who are from those communities. Los Filos has made the communities aware of the nature risks associated with accidental releases or consulted with them (through the brigade members) regarding appropriate communication and response actions.

The Chilpancingo Fire Department and the Mexican Red Cross from Iguala participated in the cyanide mock drill conducted in November 2009. Los Filos made formalized arrangement with the Hospital “Royal Care” in Iguala, the IMSS of Iguala and the IMSS of Chilpancingo to assist workers exposed to cyanide. Los Filos has trained off-site-doctors from these three hospitals.

Los Filos keeps a stakeholder contact information list in its Emergency Response Master Plan (ER Master Plan) including regulatory agencies, cyanide supplier and transporter, air services, off-site medical facilities, local police and others. In addition, the plan includes contact information for notifying community representatives. Los Filos engages in continuing consultations with these stakeholders through training sessions, mock drills, and community meetings to keep its emergency response procedures current.
**Standard of Practice 7.3:** Designate appropriate personnel and commit necessary equipment and resources for emergency response.

- [ ] in full compliance with Standard of Practice 7.3
- [ ] in substantial compliance with
- [ ] Not in compliance with

**Basis for Audit Finding:** Los Filos has committed in its emergency response plans the necessary emergency response equipment and first aid to manage all cyanide incidents at the operation and to coordinate transportation to the nearest medical facility. The ER Master Plan and the Crisis Plan describes the responsibilities and level of authority of emergency response coordinators and emergency responders for all the different site emergency scenarios, including responsibilities of the Environmental and Safety Departments and Los Filos General Manager. The ERP includes call-out procedures and updated contact information for its ERT and emergency response coordinators.

The ER Master Plan contains a list of its Emergency Response Team (ERT) and outside responders. The ER Master Plan and the ERP describe the role of outside responders. Outside responders have been involved in the cyanide related mock drills conducted by Los Filos. The operation has a list of the emergency response equipment (e.g., cyanide antidote kits, shower and eyewash stations, SCBAs, chemical protective suits, spill recover equipment, etc.) in the ERP. Los Filos has procedures to inspect the emergency response equipment to assure its availability when required.

The operation has developed a Cyanide Code Training Plan. The plan describes: 1) the training level that an employee who works with cyanide needs to receive based on the employee’s exposure risk to cyanide; 2) procedures to evaluate and revise the SOPs; and 3) training evaluation procedures. The training plan includes mine employees, contractors, and emergency responders. The plan will be revised annually.

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

- [ ] in full compliance with Standard of Practice 7.4
- [ ] in substantial compliance with
- [ ] Not in compliance with

**Basis for Audit Finding:** Los Filos keeps a stakeholder contact information list in its ER Master Plan including management regulatory agencies (such as the Federal Attorney of Environmental Protection (PROFEPA) and the Secretary of Environment and Natural Resources (SEMARNAT)), cyanide supplier (DuPont), cyanide transporter (Segutal), Mexican Red Cross from Iguala, Chilpancingo Fire Department, Civil Protection from Chilpancingo, off-site medical facilities, local police and others. In addition, the plan also includes procedures and contact information for notifying community representatives and the media.
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.

The operation is ☒ in full compliance with
☐ in substantial compliance with
☐ not in compliance with

Basis for Audit Finding: The ERP and SOPs have written procedures to recovery and neutralize liquid and solid cyanide spills. Procedures include spill containment and clean-up, and treatment of contaminated material. Spilled liquid cyanide solutions are to be decontaminated as necessary with a treatment chemical solution. The ERP describes where the chemicals are stored, how the chemical solution is to be prepared to the appropriate concentration, and what final cyanide concentration will be allowed in residual soil as evidence that the release has been completely cleaned up. The ERP specifies where cyanide releases are to be disposed of on the leach pad areas, or returned to the process circuit depending on the physical nature of the release.

The ERP requires that contaminated water and/or soils are monitored after a cyanide spill, as necessary, to identify the extent and effects of the release. The ERP includes sampling methodologies, parameters, detection limits, and potential sampling locations for contaminated soils and water. When clean-up is complete, soil samples will be taken and analyzed to verify total cleanup success.

The ERP prohibits the use of chemicals (e.g., sodium hypochlorite, ferrous sulfate or hydrogen peroxide) to treat cyanide that has entered or may enter surface waters. A release from the operation cannot adversely affect Los Filos’s water supply source since the source is located upstream from the mine facilities.

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

The operation is ☒ in full compliance with
☐ in substantial compliance with
☐ not in compliance with

Basis for Audit Finding: The ER Master Plan includes a section for annual review and update of the emergency response plans. Los Filos conducts annual mock drills based on likely cyanide release/exposure scenarios and incorporates lessons learned from the mock drills into its response planning. The emergency response plans will also be reviewed and updated following a mock drill or incident as needed. The auditor reviewed mock drill reports and previous versions of the ERP to verify compliance with this item.
8. TRAINING: Train workers and emergency response personnel to manage cyanide in a safe and environmentally protective manner.

*Standard of Practice 8.1:* Train workers to understand the hazards associated with cyanide use.

- [X] in full compliance with Standard of Practice 8.1
- [ ] in substantial compliance with Standard of Practice 8.1
- [ ] not in compliance with Standard of Practice 8.1

**Basis for Audit Finding:** Los Filos provides initial training and annual refresher training to all employees on the hazards of cyanide. Los Filos retains all cyanide-training records for all employees. Training records include the names of the employee and the trainer, the date of training, the topics covered, and test results demonstrating an understanding of the training.

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

- [X] in full compliance with Standard of Practice 8.2
- [ ] in substantial compliance with Standard of Practice 8.2
- [ ] not in compliance with Standard of Practice 8.2

**Basis for Audit Finding:** In addition to the training in cyanide hazard recognition, all personnel in job positions that involve the use of cyanide and cyanide management (including offloading, mixing, production, and maintenance) receive training on how to perform their assigned tasks with minimum risk to worker health and safety. Individual training is provided for each specific task an operator will perform related to cyanide management. Task-specific training is provided prior to working with cyanide independently. Training elements (SOPs and general cyanide training) required for each specific job are identified in the Cyanide Code Training Plan. Los Filos has personnel qualified as “Train the Trainer,” who are responsible for providing initial and refresher training related to cyanide. SOP related training is provided by Process Supervisors, who are familiar with the process and have several years of experience.

Los Filos provides annual cyanide refresher training and requires written tests to evaluate the effectiveness of cyanide training. In addition, as part of the refresher training, Los Filos discusses cyanide related health and safety issues and changes in cyanide SOPs, if any, at safety meetings. Also, operators are observed by their supervisor to evaluate effectiveness of cyanide training on a regular basis. Training records are retained and include name of the trainer, date of training, topics covered during training sessions and employee’s understanding of the training (e.g., quiz results).

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

- [X] in full compliance with Standard of Practice 8.3
- [ ] in substantial compliance with Standard of Practice 8.3
- [ ] not in compliance with Standard of Practice 8.3
Basis for Audit Finding: All personnel in job positions that involve the use of cyanide and cyanide management (including offloading, mixing, production, and maintenance) receive training in the procedures to be followed if cyanide is released. This training includes decontamination, first aid procedures and spill response. ERT and emergency coordinators are trained in use of the emergency equipment, first aid procedures for exposure to cyanide (practical and theoretical training), HazMat, collapsed structure rescue, fires involving cyanide, cyanide spill response, decontamination of contaminated soils, and use of the handheld HCN meters. Cyanide operators, and emergency responders and coordinators have participated in the mock drills to test and improve their response skills.

Off-site Emergency Responders are familiar with those elements of the ERP related to cyanide. Los Filos has agreements with the Mexican Red Cross from Iguala and the Chilpancingo Fire Department to provide training to the ERT as well as response support in case of a cyanide emergency at Los Filos. Los Filos also has made formalized arrangement with the local hospitals to treat workers exposed to cyanide, if needed.

Annual refresher training includes response to cyanide exposures and releases. Training records are retained. In addition, mock drills are conducted and evaluated from a training perspective to determine if personnel have knowledge and skills required for effective response. Lessons learned from the mock drills are incorporated into Los Filos response and training planning.


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

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

Basis for Audit Finding: Los Filos provides the opportunity to communicate issues of concern with the public through community sessions, public site tours, presentation to stakeholders, and its corporate website. Los Filos conducts community sessions where the members of the general public are encouraged to attend and discuss issues related to the mining operation including the use of cyanide at the mine. Sessions are conducted at the community sites, in Mezcala, Mazapa, and Carrizalillo. Los Filos has developed a procedure to address complaints and concerns (if any) of the communities located within the mine influence area and any external stakeholder. In addition, Los Filos provides public site tours that include a visit to the process areas. Visitors included students, technical experts, regulators, people from the communities, NGOs, media, etc. Los Filos through its corporate website also provides information on the gold extraction process used at Los Filos (http://www.goldcorp.com/operations/los_filos/). The site has a “contact_info” tab that allows an individual to contact the company via telephone.
Standard of Practice 9.2: Initiate dialogue describing cyanide management procedures and responsively address identified concerns.

The operation is ☒ in full compliance with Standard of Practice 9.2
☐ in substantial compliance with
☐ not in compliance with

Basis for Audit Finding: Los Filos creates opportunities to interact with stakeholders and provide them with information regarding cyanide management practices and procedures. Los Filos provides public site tours, which include a visit to the cyanide facilities. Visitors included students, technical experts, local and federal regulators, people from the communities and from the government, NGOs, the media, and others. Los Filos conducts community sessions where the members of the general public are encouraged to attend and discuss issues related to the mining operation including the use of cyanide at the mine. Sessions are conducted at the community sites. Los Filos organizes community events such as “the Fair on Safety, Environment, Health and Sustainable Development” in November 2009. The 3-day fair included a set of technical presentations, including a DuPont’s presentation and a presentation on Hazardous Materials.

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

The operation is ☒ in full compliance with Standard of Practice 9.3
☐ in substantial compliance with
☐ Not in compliance with

Basis for Audit Finding: Los Filos has developed written description on how their activities are conducted and how cyanide is managed in several formats, including flyers, submittals to regulatory agencies and its corporate website. Los Filos corporate website provides information on the gold extraction process used at the mine (http://www.goldcorp.com/operations/los_filos/). Los Filos 2005 sustainability report is also posted on its corporate website.

A cyanide exposure or release will be reported to regulatory agencies, as required, within the corresponding regulatory timeframe. Spill reporting procedures and quantities are described in the ERP. Information on cyanide exposures and releases that will be submitted to the regulatory agencies will be information available to the public. Regulatory agencies may include the Work and Social Prevention Secretary and Public Ministry for exposures, and PROFEPA and SEMARNAT for releases.