

Corrective Action Completion Reports

Kinross/ Compañía Minera Mantos De Oro (MDO)
La Coipa Mine, Maricunga District, Chile

 CORRECTIVE ACTION COMPLETION REPORT ICMC Audit – La Coipa Mine	Control No.: <u>MDO-ICMC-CAR-01</u> Date issued: <u>June 20, 2011</u>
ICMC Standard of Practice Section Reference: 3.1(8)(a)	
<p>Introduction: This Corrective Action Completion Report presents the evidence to support the successful implementation of the MDO-ICMC-CAR-01 to correct the deficiency identified in the ICMC Certification Audit of the La Coipa Mine, operated by Compañía Minera Mantos De Oro (MDO), a Kinross Gold Corporation company. The audit was conducted December 13 through 17, 2011.</p>	
<p>Description of Deficiency: Air extractors are installed on the mixing and dosing tanks located within the Cyanidation Plant; however, the only building ventilation provided within the two-level facility is via one overhead door and two man-doors located at ground level. The overhead door and primary man-door are both located on the east wall of the building, and a second man-door is located on the west wall. The door on the west wall is an emergency exit and remains closed; therefore, the door system does not provide cross ventilation. Furthermore, no exhaust fans are located in the building. Therefore, MDO must improve the ventilation within the Cyanidation Plant to prevent the potential build-up of Hydrogen Cyanide (HCN) gas, since cyanide is stored within the building in both solid and liquid form, and because the cyanide mixing operation takes place on an elevated platform (i.e., on the second level) within the building.</p>	
<p>Corrective Action Required (describe/attach supplemental information as necessary):</p> <ul style="list-style-type: none"> • Implement measures to improve the ventilation within the Cyanidation Plant, such as installing overhead exhaust fans and/or establishing a cross-flow system. • Update procedures to ensure that ventilation systems in the Cyanidation Plant are operational prior to mixing events. 	
<p>Evidence Required for Verification of Corrective Action Completion:</p> <ul style="list-style-type: none"> • Photographic evidence demonstrating installation of ventilation improvements in the Cyanidation Plant. • Copies of updated procedures and checklists for ensuring ventilation systems in the Cyanidation Plant are operational prior to mixing events, along with relevant training records. 	

Evidence Provided to Verify Completion of Corrective Action: MDO provided the required evidence described above. Specifically, this evidence includes:

- Updated version of Procedure I-FI-010, "*Preparation of Cyanide*," and its associated checklist. The updated procedure requires workers to verify that the gas extractor in the Cyanidation Plant (mixing plant) is in service and that the building windows (lattice) are open to ensure good ventilation. The procedure also requires workers to check the reading on the fixed HCN monitor in the area and confirm the reading with the personal monitoring device.
- Written correspondence regarding the rationale for installing the new ventilation system (windows on lower level of building).
- Photographs of the newly installed ventilation windows.
- Associated training records.

Copies of these documents will be retained in ENVIRON's internal project records.

Corrective Action Completion Date: 7 July 2012

Closure Verified:



Lead Auditor: John T. Lambert

Date: 7 July 2012

 <p>ENVIRON CORRECTIVE ACTION COMPLETION REPORT ICMC Audit – La Coipa Mine</p>	<p>Control No.: <u>MDO-ICMC-CAR-02</u></p> <p>Date issued: <u>June 20, 2011</u></p>
<p>ICMC Standard of Practice Section Reference: 4.1(5)</p>	
<p>Introduction: This Corrective Action Completion Report presents the evidence to support the successful implementation of the MDO-ICMC-CAR-02 to correct the deficiency identified in the ICMC Certification Audit of the La Coipa Mine, operated by Compañía Minera Mantos De Oro (MDO), a Kinross Gold Corporation company. The audit was conducted December 13 through 17, 2011.</p>	
<p>Description of Deficiency: With the exception of the La Coipa Closure Plan Task (P-MA-018) and the Operational Contingency Plan for the Water Remediation Plant (PM-MA-019), MDO did not present comprehensive cyanide management contingency procedures, which provide actions to take in response to conditions of temporary closure or cessation of operations.</p>	
<p>Corrective Action Required (describe/attach supplemental information as necessary): Provide procedures for ongoing water management, cyanide facility inspections, and monitoring during temporary closure or cessation of operations.</p>	
<p>Evidence Required for Verification of Corrective Action Completion: Copies of the cyanide management contingency procedures for ongoing water management, cyanide facility inspections, and monitoring during temporary closure or cessation of operations.</p>	
<p>Evidence Provided to Verify Completion of Corrective Action:</p> <p>MDO provided the required evidence described above. Specifically, this evidence includes:</p> <ul style="list-style-type: none"> • Procedure P-MA-022, “<i>Plan de Contingencia Operacional Cierre Temporal Planta de Procesos</i>,” addressing proper operation of the process plant in force majeure situations that create a temporary shutdown (caused by staff shortages, power outages, sabotage, etc.) in order to maintain the plant in the best possible conditions to prevent harm to people and the environment, according to the standards of environment, safety and occupational health of MDO. <p>A copy of this document will be retained in ENVIRON’s internal project records.</p>	

Corrective Action Completion Date: 7 July 2012

Closure Verified:



Lead Auditor: John T. Lambert

Date: 7 July 2012

 <p style="text-align: center;">ENVIRON CORRECTIVE ACTION COMPLETION REPORT ICMC Audit – La Coipa Mine</p>	<p>Control No.: <u>MDO-ICMC-CAR-03</u></p> <p>Date issued: <u>June 20, 2011</u></p>
<p>ICMC Standard of Practice Section Reference: 4.1(7) and 4.1(8)</p>	
<p>Introduction: This Corrective Action Completion Report presents the evidence to support the successful implementation of the MDO-ICMC-CAR-03 to correct the deficiency identified in the ICMC Certification Audit of the La Coipa Mine, operated by Compañía Minera Mantos De Oro (MDO), a Kinross Gold Corporation company. The audit was conducted December 13 through 17, 2011.</p>	
<p>Description of Deficiencies: Generally, during the facility inspection conducted by the auditors during this onsite verification audit, certain deficiencies were observed with the elements listed under inspection requirements. Issues observed, include secondary containments in poor condition and/or containing sediment/solution, formation of cyanide salts on equipment and facilities (primarily in the Cyanidation Plant) indicating leaking pumps and valves, and general housekeeping issues. Additionally, there was not a sufficient inspection/monitoring history of the leak detections systems installed in the double-lined ponds to demonstrate that the ponds are being properly managed to protect seepage. For these reasons, there is concern that the current inspection program is not sufficiently identifying deficiencies with the cyanide facilities in a proactive manner. Although the PM program is functioning well to keep the facilities and systems operational, the corrective maintenance, repair, and housekeeping components associated with issues identified during inspections was not apparent in all cases. Therefore, MDO must establish a formal and comprehensive inspection program that is effective in identifying repair needs, maintenance issues, and potential upset conditions for all cyanide process areas and facilities and must demonstrate its implementation over a reasonable period.</p> <p>Furthermore, aside from the reports for major incidents, maintenance records, the weekly leak detection system (LDS), facility and wildlife inspections performed by the Environmental Department, and evidence of online monitoring of the Emergency Pond solution level, MDO did not provide inspection checklists or logbook records during the onsite audit demonstrating that inspections of cyanide facilities are being conducted on a routine basis. As an example, although MDO personnel indicated that process tanks are inspected daily for signs of corrosion and leaks, there was no evidence of these inspections. Although, MDO developed and provided evidence of new inspection checklists subsequent to the onsite audit, the operation must demonstrate implementation of a comprehensive inspection program, which covers all necessary cyanide facilities and components. Inspections must appropriately document problem areas that require repair as well as completion of such repairs. All of these elements should be addressed in inspection forms that document any deficiencies observed, the resulting written work requests, and the nature of corrective actions taken.</p>	

Specific deficiencies identified during the audit, for which further evidence is necessary to demonstrate full compliance under Standards of Practice 4.1(7) and 4.1(8) of the Code, are listed below.

- During the onsite audit, several concrete containment walls were damaged and required repair. Additionally, the majority of containments had sediment and/or solution and slurry in them, preventing inspection of the containment floors. Therefore, following the onsite audit, MDO initiated work to clean out and repair the containments. A summary of the work performed to repair the concrete is documented in a report prepared by the contractor (Inversiones JV) titled, "Repair of Parapets and Concrete Slabs," dated April 4, 2011. Although the report documents the construction techniques and materials used to perform the repairs, additional documentation is necessary to demonstrate that all necessary repairs have been completed and to verify the current condition of all concrete secondary containments.
- The La Coipa operation has three, double-lined process ponds with a LDS. These ponds include the Refinery Pond, the Emergency Pond, and the Remediation Pond (a.k.a. Rahco Pond). In the weeks just prior to this onsite verification audit, MDO began monitoring the LDS for each pond. During the first monitoring event, solution was discovered in the Refinery Pond and Rahco Pond systems. MDO has since provided LDS monitoring results for measurements taken during the months of December 2010 through April 2011. The results show continued leakage in the Refinery Pond and the Remediation Pond, and the results for March indicate solution in the Emergency Pond LDS. Consequently, MDO is currently emptying the pond system to investigate and repair the upper liners in accordance with procedure P-MA-007(Monitoring of Ponds and Tanks). MDO stated that the Refinery Pond contains a large amount of compacted sediment, which is complicating and slowing the cleanout process and that freezing temperatures are also prolonging the effort. Ultimately, MDO must complete the pond repairs and demonstrate that the liner systems and LDS for each pond are operating according to design.
- Due to the extremely dry conditions at the site, the La Coipa operation does not have surface water diversions or other stormwater controls other than a rock-filled (riprap) channel located along the west edge of the TSF, which serves to channel snowmelt around the dry-stack facility. MDO Environmental personnel indicated that this channel is not inspected on a routine basis. Because the channel serves to protect the TSF from erosion, and helps to ensure the stability of the facility, MDO must inspect its physical integrity on a reasonable basis.

Corrective Action Required (describe/attach supplemental information as necessary):

- Establish a formal and comprehensive inspection program that is effective in identifying repair needs, maintenance issues, and potential upset conditions for all

cyanide process areas and facilities and demonstrate its implementation over a reasonable period. The inspection program must be designed to address specific issues related to cyanide management. For example, MDO must periodically visually inspect all cyanide facilities listed under Standard of Practice 4.1.7 (i.e., tanks, secondary containments, leak detection and collection systems, pipelines, pumps, valves, ponds/impoundments, and the Tailings Storage Facility (TSF) and related systems) for signs of corrosion and leakage, their physical and structural integrity, available capacity, and the parameters identified as critical to proper solution management (such as available freeboard in the ponds). The inspections must result in corrective actions such as prompt repair of leaking equipment and damaged concrete containments, cleanup of spills within containments, and development of work requests for the formal work order completion by the Maintenance or other appropriate Department. These inspections must be appropriately documented.

- Provide additional documentation to demonstrate that all necessary repairs to the concrete secondary containments have been completed and to verify the current condition of all the concrete containments that provide secondary containment for cyanide process tanks and vessels.
- Complete the repairs to the Refinery Pond, the Emergency Pond, and the Remediation Pond (a.k.a. Rahco Pond) and demonstrate that the liner systems and LDS for each pond are operating according to design.
- Implement an inspection program for the rock-filled (riprap) channel located along the west edge of the TSF, which serves to channel snowmelt around the dry-stack facility.

Evidence Required for Verification of Corrective Action Completion:

- Copies of the procedures, which establish the formal operational inspection program for all cyanide process areas and facilities listed under Standard of Practice 4.1(7) along with the associated inspection and monitoring records documenting inspection of the necessary facility components and parameters. To demonstrate implementation of the comprehensive inspection program, MDO must provide the inspection records completed for a minimum of one full inspection cycle. Based on the auditor's review of the records provided for the first inspection cycle, additional records may (or may not) be necessary to demonstrate full compliance. These inspection procedures and records must include the rock-filled (riprap) channel located along the west edge of the TSF, which serves to channel snowmelt around the dry-stack facility; however, evidence of the preventative maintenance inspections and corrective maintenance performed by the Maintenance Department is not required.
- Additional photographic and written documentation to demonstrate that all necessary repairs to the concrete secondary containments have been completed and to verify the current condition of all the concrete containments, which provide

secondary containment for cyanide process tanks and vessels. The written documentation must include a statement regarding the physical integrity of the containment walls and floors and must list the containments that were repaired.

- Documentation (photographic and written) demonstrating completion of the repairs to the Refinery Pond, the Emergency Pond, and the Remediation Pond (a.k.a. Rahco Pond) along with copies of the LDS monitoring records for these ponds over the three-month period following the repairs demonstrating that the liner systems and LDS for each pond are operating according to design.

The auditor reevaluated the evidence requirements and waived the requirement for MDO to provide three months monitoring data for the leak detection systems installed at the Refinery Pond, the Emergency Pond and the Remediation Pond. The purpose for originally requesting three months data was for MDO to demonstrate that the LDS monitoring program for each of the ponds had been reestablished and also to provide secondary evidence that the liner repairs were sound. In light of the constrained timeframe for completion of **MDO-ICMC-CAR-03** owing to the construction difficulties and weather conditions that delayed completion of the pond liner repairs, the auditor feels that this secondary requirement is unwarranted. The primary evidence needed to address the pond repairs includes photographs and thorough QA/QC documentation with sign-off by a qualified person demonstrating completion and quality of the repairs. Furthermore, confirmation of the liner repairs and the reestablishment of the LDS monitoring program are generally addressed elsewhere under “establishment of a formal operational inspection program” also requested by **MDO-ICMC-CAR-03**.

Evidence Provided to Verify Completion of Corrective Action:

MDO provided the required evidence described above. Specifically, this evidence includes:

- Maintenance and Inspection Records
 - Procedure P-MA-007, “*Monitoring of Ponds, Tanks, Containments and Tailings,*” which establishes the procedure for monitoring the leak detection systems installed in the double-lined process ponds.
 - Form F-MA-021 – Monthly inspections of the leak detection systems (piezometers) installed in the process tank ring-beam foundations (November 2011-April 2012).
 - Form F-MA-027 – Weekly inspection records for the leak detection systems installed in the double-lined process ponds (October 2012).
 - Form F-MA-029 – Operational inspection records for pumps, valves and pipes (August 2012-September 26, 2012).
 - Form F-MA-030 – Monthly records for visual inspection of process tanks by the Environmental Department (November 2011-April 2012). Includes condition of the tanks, access, associated pipes, drains, and concrete containment structures.
 - Form F-MA-032 – Monthly inspection records for the TSF drainage channel (July 2011-April 2012) along with photographs depicting the condition of the

channel structure.

- Inspection records for the ball and SAG mills and thickener (February and April 2012).
- Monthly inspection records for the Filtration Plant (February-April 2012).
- Maintenance programs and schedules for cyanide facilities.

- Secondary Containment Repairs
 - Report regarding the work plan to repair the damaged secondary concrete containment walls (Inversiones JV Ltda., April 4, 2011).
 - Secondary Containment Systems Report documenting repairs made to the damaged concrete containment walls and identifying the containments repaired (MDO, May 2012).
 - Laboratory results for the concrete testing performed during repair of the damaged secondary concrete containment walls (Cesmec, June 29, 2012).
 - Concrete mix report (Vecchiola S.A.).
 - Photographs of repaired concrete containment walls.

- Process Pond Repairs
 - Laboratory results for the concrete and soil compaction testing performed during construction of the catchment basin at the Refinery Pond (Cesmec, June 29, 2012).
 - Electronic Leak Detection Report for the Emergency Pond documenting the assessment made to identify leaks in the pond liner system (Geodef, May 2012).
 - Electronic Leak Detection Report for the Mill Pond documenting the assessment made to identify leaks in the pond liner system (Geodef, May 2012).
 - Electronic Leak Detection Report for the Remediation Pond documenting the assessment made to identify leaks in the pond liner system (Geodef, May 2012).
 - Inspection Report documenting QA/QC inspection of HDPE liner installation at the Refinery Pond (Inversiones JV Ltda., February 21, 2012).
 - Final Report documenting construction of the concrete sediment basin (decant pond) at the Refinery Pond (Inversiones JV Ltda., March/April 2012).
 - Inspection Report documenting repairs made to the 60-mil HDPE primary liner at the Emergency Pond (Cesmec, October 31, 2012).
 - Inspection Report documenting repairs made to the 60-mil HDPE primary liner at the Remediation Pond (Cesmec, October 31, 2012).

Copies of these documents will be retained in ENVIRON's internal project records.

Corrective Action Completion Date: 7 November 2012

Closure Verified:



Lead Auditor: John T. Lambert

Date: 7 November 2012

 <p style="text-align: center;">ENVIRON CORRECTIVE ACTION COMPLETION REPORT ICMC Audit – La Coipa Mine</p>	<p>Control No.: <u>MDO-ICMC-CAR-04</u></p> <p>Date issued: <u>June 20, 2011</u></p>
<p>ICMC Standard of Practice Section Reference: 4.4(1)</p>	
<p>Introduction: This Corrective Action Completion Report presents the evidence to support the successful implementation of the MDO-ICMC-CAR-04 to correct the deficiency identified in the ICMC Certification Audit of the La Coipa Mine, operated by Compañía Minera Mantos De Oro (MDO), a Kinross Gold Corporation company. The audit was conducted December 13 through 17, 2011.</p>	
<p>Description of Deficiency: The Refinery Pond system, which includes a lined pond and two concrete catchment basins designed to capture sediment from process overflow slurry prior to entering the pond, is used to store process solution containing WAD cyanide concentrations greater than 50 mg/l. Additionally, WAD cyanide concentrations in the water stored in the Remediation Pond (a.k.a. Rahco Pond) exceed 50 mg/l on a consistent basis. Therefore, MDO has committed to installing physical deterrent systems at these two ponds to protect avian wildlife.</p> <p>Additionally, at the time of the onsite audit, portions of the existing fencing surrounding the process ponds was in need of repair, with complete sections missing in certain areas. In particular, the fence at the Refinery Pond was in poor condition and did not fully surround the pond area. Sections of fencing requiring repair were also observed at the Emergency Pond and the Mill Pond.</p> <p>Finally, sedimentation had accumulated at the Emergency Pond, creating a beach area adjacent to the solution pool, which functions to attract birds to the pond.</p>	
<p>Corrective Action Required (describe/attach supplemental information as necessary):</p> <ul style="list-style-type: none"> • Implement avian deterrent systems at the Refinery Pond and Remediation Pond, which consider the bird species identified at the La Coipa operation, the local environment (including habitat and climate), and the specific characteristics of the operation with special regard to the two ponds. • Repair the existing fencing surrounding all the process ponds and ensure that the fencing completely surrounds each pond area. • Remove any sedimentation that has accumulated at the Emergency Pond and revise operating procedures to include measures for ensuring that beach areas are not allowed to form at the Mill Pond and the Emergency Pond following process upsets while the ponds contain solution, or at the Refinery Pond and Remediation Pond. 	

- Revise the wildlife monitoring program to assess the ongoing success of the protective measures that are implemented at the Refinery Pond and Remediation Pond.

Evidence Required for Verification of Corrective Action Completion:

- A description the new avian deterrent systems implemented at the Refinery Pond and Remediation Pond along with the rationale for selecting the systems, and photographic documentation demonstrating installation of the systems.
- Photographic documentation demonstrating repair of the fencing surrounding the Mill Pond, Refinery Pond, and Emergency Pond and demonstrating the elimination of any beach areas at the Emergency Pond.
- A copy of the procedure, which includes measures for ensuring that beach areas are not allowed to form at the Mill Pond and the Emergency Pond while the ponds contain solution, or at the Refinery Pond and Remediation Pond.
- A copy of the updated procedure (I-MA-003 – Wildlife Monitoring), which includes the protocol for assessing the ongoing success of the new protective measures implemented at the Refinery Pond and Remediation Pond.

Evidence Provided to Verify Completion of Corrective Action:

MDO provided the required evidence described above. Specifically, this evidence includes:

- Monitoring
 - Bird Monitoring Protocol used to determine if birds regularly fly over the process ponds, or if birds actually use the ponds, and to assess if waterfowl (ducks, sandpipers, etc.) are flying over the La Coipa mine setting (A. Jaramillo, October 26, 2010).
 - Bird Census form used to record bird species and their use of the ponds.
 - Form F-MA-031, “*Wildlife Inspection and Monitoring*,” used to document routine (weekly) inspections of birds at the process ponds completed for inspections performed over the period June 6, 2011 through April 23, 2012 (March 2012 data missing).
 - Procedure I-MA-003, “*Wildlife Monitoring*,” describing avian deterrent systems installed at the Refinery Pond and Remediation Pond, requiring verification of no beaches within the ponds and prompt emptying of the Emergency Pond and Mill Pond when they contain solution from upset conditions.
- Avian Studies
 - Birds of Mina La Copia, Atacama Region, Chile and Assessment of Potential Interactions with Mine Procedures (A. Jaramillo, November 2010).
 - Memorandum; Recommendations for Avian Avoidance of Solution Ponds at Mina La Coipa, Atacama, Chile, describing the deterrent system implemented at La Coipa as one alternative (A. Jaramillo, February 2011).

- Avian Deterrent Systems
 - Photographs of avian deterrent systems installed at the Refinery Pond (including adjoining sedimentation basin) and the Remediation Pond.
 - Photographs of the repaired fencing at the Mill Pond, Refinery Pond, Emergency Pond and the Remediation Pond.
 - Photographs of the Emergency Pond demonstrating elimination of water and beaches.
 - Photographs of Mill Pond demonstrating elimination of water.

Copies of these documents will be retained in ENVIRON's internal project records.

Corrective Action Completion Date: 7 November 2012

Closure Verified:



Lead Auditor: John T. Lambert

Date: 7 November 2012

 CORRECTIVE ACTION COMPLETION REPORT ICMC Audit – La Coipa Mine	Control No.: <u>MDO-ICMC-CAR-05</u> Date issued: <u>June 20, 2011</u>
ICMC Standard of Practice Section Reference: 4.7(3)	
<p>Introduction: This Corrective Action Completion Report presents the evidence to support the successful implementation of the MDO-ICMC-CAR-05 to correct the deficiency identified in the ICMC Certification Audit of the La Coipa Mine, operated by Compañía Minera Mantos De Oro (MDO), a Kinross Gold Corporation company. The audit was conducted December 13 through 17, 2011.</p>	
<p>Description of Deficiency:</p> <p>Although the La Coipa operation has spill prevention and containment measures in place, MDO must update its formal procedures to respond better to spills collected in the concrete containments. Procedures must be written and implemented to specifically address timely cleanout of secondary containments following process upsets so that full containment capacities are available. Since process slurry is initially released to the concrete secondary containment during upset conditions, the solid portion inundates the concrete containments (as sediment) and is further transported to the Refinery Pond and ultimately, to the Emergency Pond. MDO personnel indicated, that in the past and more often than not, the concrete containments have contained significant amounts of sediment (reducing their capacity) since the material was not always removed between upset events.</p> <p>Although MDO removes and transports the sediment collected in the containments to the Tailings Storage Facility (TSF), in the past, the operation has temporarily placed the material on unlined areas prior to final disposal. For example, spilled material from within the Filtration Plant was removed from the plant building with a small loader and temporarily stored on an unlined area located outside of the building. The material was then loaded into a truck and transported to the TSF. This practice was also conducted during cleanout of other containment areas (e.g., at the CIL circuit). The practice of storing cyanide slurry or material outside of containment does not comply with the ICMC; therefore, all spilled process slurry/sludge and tailings must remain within containment prior to return to the process or the TSF.</p>	
<p>Corrective Action Required (describe/attach supplemental information as necessary):</p> <ul style="list-style-type: none"> • Revise operating procedures to better address timely cleanout of the concrete containments following process upsets (i.e., within 48 to 96 hours after conditions return to normal), so that they function only as temporary, secondary containment and not to store process solution, slurry and sediment long term. 	

- Revise operating procedures to eliminate the practice of temporarily storing process material on unlined areas prior to final disposal to the TSF.

Evidence Required for Verification of Corrective Action Completion:

- Copies of the updated and/or new procedures addressing timely cleanout of secondary containments following process upsets, and eliminating the practice of temporarily storing process material on unlined areas.
- Photographic evidence and other data demonstrating completion of construction works for the additional measures implemented (i.e., construction of the lined/concrete area outside the Filtration Plant for temporary storage of process material), including the results of the QA/QC program implemented during the construction of these improvements and/or modifications, certifying that such improvements and/or modifications were completed in accordance with accepted engineering standards and specifications.

Evidence Provided to Verify Completion of Corrective Action:

MDO provided the required evidence described above. Specifically, this evidence includes:

- Procedure I-FI-129, "*Operation of Plant Ponds*," providing requirements for keeping secondary containments free of spill material (i.e., removing spill material within 96 hours following an upset event) and for transporting spill material directly to the tailings storage facility. The updated procedure also requires that the Emergency Pond and Mill Pond are kept empty, clean and free of beach formations.
- Training records regarding updated Procedure I-FI-129.
- Final Work Report providing construction documentation complete with material specifications for the concrete containment slab constructed outside of the Filtration Plant building (Inversiones JV Ltda., February 2012).
- Memorandum with photographs describing the containment/drainage features of the concrete containment slab constructed outside the Filtration Plant building (Kinross Gold Corporation, June 26, 2012).
- Photographs of the concrete containment slab constructed outside of the Filtration Plant building.

Copies of these documents will be retained in ENVIRON's internal project records.

Corrective Action Completion Date: 7 July 2012

Closure Verified:



Lead Auditor: John T. Lambert

Date: 7 July 2012

 CORRECTIVE ACTION COMPLETION REPORT ICMC Audit – La Coipa Mine	Control No.: <u>MDO-ICMC-CAR-06</u> Date issued: <u>June 20, 2011</u>
ICMC Standard of Practice Section Reference: 4.7(5)	
<p>Introduction: This Corrective Action Completion Report presents the evidence to support the successful implementation of the MDO-ICMC-CAR-06 to correct the deficiency identified in the ICMC Certification Audit of the La Coipa Mine, operated by Compañía Minera Mantos De Oro (MDO), a Kinross Gold Corporation company. The audit was conducted December 13 through 17, 2011.</p>	
<p>Description of Deficiency: The auditor has requested clarification regarding the pipeline system between the Rahco Pond and the Refinery Pond, which is located outside the Remediation Area groundwater capture zone in order to determine the need for spill prevention or containment measures for these pipes.</p> <p>Additionally, further photographic evidence and clarification has been requested regarding the pipe-in-pipe containment systems installed subsequent to the onsite audit, to verify the method and/or measures implemented to detect and collect leakage from these buried pipelines.</p>	
<p>Corrective Action Required (describe/attach supplemental information as necessary):</p> <ul style="list-style-type: none"> • Provide clarification concerning segments of the pipeline system between the Rahco Pond and the Refinery Pond, which extend beyond the Remediation Area capture zone. Elements requiring clarification include: 1) confirmation that the entire length of the pipeline system located outside the Remediation Area groundwater capture zone is above ground; 2) a description of where leakage from this pipeline system would flow and how it would be captured/contained in the event of a pipe rupture; and 3) a description of the pipeline inspection frequency. • Provide evidence demonstrating the method and/or measures implemented to detect and collect leakage from the buried pipelines, which have been provided with pipe-in-pipe containment. To clarify the work that has been completed to date, provide additional evidence and supporting information (e.g., a schematic drawing identifying the locations of the buried pipelines that have been equipped with pipe-in-pipe containment and photographs showing where these pipes enter the secondary containments in order to verify the method of leak detection and recovery). • Perform any further corrective actions that may become necessary based on the auditor’s review of the evidence provided for the requested actions listed above. 	

Evidence Required for Verification of Corrective Action Completion: Documentation (i.e., written clarifications, maps, drawings and photographic evidence) addressing the corrective actions, as stated above.

Evidence Provided to Verify Completion of Corrective Action:

MDO provided the required evidence described above. Specifically, this evidence includes:

- Letter providing a description and justification for closing out CAR-06, based upon reasoning that, any leakage from the Remediation Pond or from the associated underground and surface piping would report to the La Coipa Quebrada. The functioning Remediation Capture System, installed before this 2010 ICMC audit, effectively serves as a secondary containment system for any such leakage migrating via surface or underground pathways (Kinross Gold Corporation, August 17, 2012).
- Drawing depicting the Remediation Facility location and layout for Phases 1 and 2 (MDO, May 2012).
- Schematic diagram depicting the current remediation system design and operation (Phases 1 through 3).
- Work Report providing construction documentation complete with photographs and material specifications for the pipe-in-pipe containment systems installed on buried process pipelines at the Mill area (Olazo Hnos, May 10, 2011).
- Work Report providing construction documentation complete with photographs and material specifications for the pipe-in-pipe containment systems installed on buried process pipelines at the filtration and CCD areas (Olazo Hnos, May 18, 2011).
- Final Report documenting construction of the concrete sediment basin (decant pond) at the Refinery Pond (Inversiones JV Ltda., March/April 2012).
- Design Drawing No. PL-10-17-003/11 providing construction details (MDO, April 2011).
- Diagram depicting the location of the buried pipelines with pipe-in-pipe containment systems (MDO, July 2012).

Copies of these documents will be retained in ENVIRON's internal project records.

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Corrective Action Completion Date: 7 July 2012

Closure Verified:



Lead Auditor: John T. Lambert

Date: 7 July 2012

 CORRECTIVE ACTION COMPLETION REPORT ICMC Audit – La Coipa Mine	Control No.: <u>MDO-ICMC-CAR-07</u> Date issued: <u>June 20, 2011</u>
ICMC Standard of Practice Section Reference: 4.8(5)	
<p>Introduction: This Corrective Action Completion Report presents the evidence to support the successful implementation of the MDO-ICMC-CAR-07 to correct the deficiency identified in the ICMC Certification Audit of the La Coipa Mine, operated by Compañía Minera Mantos De Oro (MDO), a Kinross Gold Corporation company. The audit was conducted December 13 through 17, 2011.</p>	
<p>Description of Deficiency: MDO was unable to provide Quality Assurance and Quality Control (QA/QC) documentation or as-built certification for all active cyanide facilities at the La Coipa operation and did not provide inspections results for those facilities concluding that continued operation within established parameters will protect against cyanide exposures and releases. Generally, the cyanide facilities for which QA/QC, as-built, or qualified inspection documentation has not yet been provided include, the Mill Pond, the Remediation Pond and the overland conveyors used to transport tailings from the Filtration Plant to the TSF.</p> <p>Additionally, the reports presenting the results of the qualified engineering inspections, which MDO commissioned for certain cyanide facilities, identify non-conformities that MDO must rectify. The inspection reports identifying the non-conformities include:</p> <ul style="list-style-type: none"> • MS Templo Ltda., “Visual Inspection of the Structural State of Pillars and Beams to a Technical Evaluation from Design Plans and Code AWS D1.1,” April 26, 2011; and • MS Templo Ltda., “Description of the Work Performed in the Technical Assessment of the Pipes and/or Tubings in the MDO Plant, ICMC Project Certification,” May 4, 2011. 	
<p>Corrective Action Required (describe/attach supplemental information as necessary):</p> <ul style="list-style-type: none"> • Perform engineering evaluations of the cyanide facilities listed above, for which original QA/QC documentation is unavailable or for which qualified inspections have not been completed. The evaluations must be performed by a qualified person (e.g., a professional engineer or equivalent) certifying the physical integrity of the facilities and should consider any available maintenance and/or testing records in determining the integrity or suitability of the facilities. The certification must include a statement that continued operation of the facilities within established parameters will protect against cyanide exposures and releases. 	

- Provide evidence demonstrating that the non-conformities identified in the MS Templo Ltda. inspection reports (identified above) have been rectified.

Evidence Required for Verification of Corrective Action Completion:

- Copies of the engineering evaluations certifying the physical integrity of the identified facilities.
- Statements by a qualified person, certifying that the non-conformities identified in the MS Templo Ltda. inspection reports have been rectified.

Evidence Provided to Verify Completion of Corrective Action:

MDO provided the required evidence described above. Specifically, this evidence includes:

- Seventeen (17) reports documenting pipe reinforcement and thickness testing [MS Templo Ltda. (MS Templo), May 31, 2012].
- Fourteen (14) reports documenting reinforcement of process tanks (MS Templo, May 31, 2012).
- Report documenting the assessment and repair of the concrete access ramp in the Mill Pond (MS Templo, June 11, 2012).
- Concrete test results for the Mill Pond access ramp floor and walls (Eurocalidad, June 13, 2012).
- Report documenting the structural assessment performed on the Number 13 tailings conveyor system (MS Templo, June 4, 2012).
- Report documenting the structural assessment performed on the Number 16 tailings conveyor system (MS Templo, June 4, 2012).
- A written statement from MS Templo certifying that the nonconformities identified in its report titled, "INSPECCION VISUAL DEL ESTADO ESTRUCTURAL DE PILARES Y VIGAS DE ACUERDO A EVALUACION TECNICA CONTRA PLANOS DE DISEÑO Y CODIGO AWS D1.1" (dated April 26, 2011), have been rectified. This inspection was completed to assess the physical integrity of the structural components of the various process buildings.
- A written statement from MS Templo certifying that the nonconformities identified in its report titled, "DESCRIPCION DEL TRABAJO USADO EN LA EVALUACION TECNICA DE LAS CAÑERIAS Y/O TUBERIAS DE PLANTA MDO" (dated May 4, 2011) have been rectified.

- Inspection Report documenting repairs made to the 60-mil HDPE liner at the Mill Pond (Cesmec, October 31, 2012).
- Inspection Report documenting repairs made to the 60-mil HDPE primary liner at the Remediation Pond (Cesmec, October 31, 2012).
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Copies of these documents will be retained in ENVIRON's internal project records.

Corrective Action Completion Date: 7 November 2012

Closure Verified:



Lead Auditor: John T. Lambert

Date: 7 November 2012

 ENVIRON CORRECTIVE ACTION COMPLETION REPORT ICMC Audit – La Coipa Mine	Control No.: <u>MDO-ICMC-CAR-08</u> Date issued: <u>June 20, 2011</u>
ICMC Standard of Practice Section Reference: 6.2(6)	
<p>Description of Deficiency: Although shower/eyewash stations were observed in the mill (two units on the upper floor and one unit on the lower floor; the filtration plant (one unit on the upper floor fed by a small overhead tank) and the mix plant (one unit on the ground floor), no shower/eyewash stations were located on the ground floor of the filtration plant, the upper deck of the mix plant, or on the deck above the CIL tanks. Also the units in the mix room and ground floor of the mill were not equipped with a quick release valves but operated by a small valve handle. In addition to the shower/eyewash stations there are a number of self-contained eyewash stations; however, there was no process in place for periodically replacing the water in the eyewash reservoirs.</p> <p>Subsequent to the field component of the audit MDO purchased nine shower/eyewash stations and had began to replace existing stations and installing new stations in those the areas previously lacking. Prior to submission of the final audit report to ICMI, evidence was provided that a station had been installed on the upper deck of the mix plant and the valve of the station on the ground floor of the mix plant had been replaced with a quick release style valve. The remaining work was still in progress.</p>	
<p>Corrective Action Required (describe/attach supplemental information as necessary):</p> <p>The following action items are required:</p> <ul style="list-style-type: none"> • Install combination emergency eyewashes/showers at all major exits from the mill, cyanide plant, cyanide mixing area, and filtration plant; and on the CIL tank deck, and appropriate operations decks within process plant and mill • Install permanent regulated 30 to 40 psi water supply to all combination emergency eyewashes/showers • Ensure that existing emergency showers are fitted with emergency release style valves • Obtain information from supplier regarding periodic replacement of water in self contained eyewash stations that have a potential water quality issue, and implement supplier’s recommendations 	

Evidence Provided to Verify Completion of Corrective Action:

- Purchase Order dated 20 June 2011 for nine shower/eyewash units
- Service Order dated 24 May 2011 for installation of shower/eyewash units
- Report dated May 2012 providing information and photographs showing the installation and operation of one new shower/eyewash in the grind area; four in the cyanide plant; two in the filtration plant, and one near the clarifier. Report provides confirmation that the showers are fitted with emergency release style valves, eyewash supply pressure was approximately 35 psi, and eyewash reservoirs were all removed from service.
- Photographs showing installation of shower/eyewash unit in dog house located on deck above CIL Tanks.

Copies of these documents will be retained in ENVIRON's internal project records.

Corrective Action Completion Date: 7 July 2012

Closure Verified:



Lead Auditor: John T. Lambert

Date: 7 July 2012