



CORRECTIVE ACTION
COMPLETION REPORT

April 2016

**ICMC INITIAL CERTIFICATION
CORRECTIVE ACTION COMPLETION REPORT**

**Pinos Altos Mine
Chihuahua, Mexico**

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Distribution:
ICMI – 1 pdf
Pinos Altos – 1 pdf

April 27, 2016

1406924



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1.0 INTRODUCTION

The Pinos Altos Mine (Pinos Altos), which is operated by Agnico Eagle Mexico, S.A. de C.V., was conditionally certified under the International Cyanide Management Code (the Code) on April 27, 2015. This Corrective Action Completion Plan (the Plan) presents the evidence to support the successful implementation of the corrective actions presented in the April 2015 Corrective Action Plan¹ for the Standards of Practice identified as “substantially compliant” in the April 2015 Summary Audit Report².

Pinos Altos submitted evidence to support implementation of the corrective actions by April 14, 2016, in accordance with the schedule in the Corrective Action Plan. This Corrective Action Completion Report summarizes the auditor’s evaluation of that evidence and the auditor’s findings related to full compliance.

¹ Golder Associates Inc. (2015). ICMC Initial Certification Corrective Action Plan, Pinos Altos Mine, Chihuahua, Mexico. April 15.

² Golder Associates Inc. (2015). ICMI Initial Certification Summary Report, Pinos Altos Mine, Chihuahua, Mexico. April 15.



2.0 VERIFICATION OF CORRECTIVE ACTION PLAN IMPLEMENTATION

The following sections detail the corrective actions completed to bring the operation into 'full compliance' with the Code for each of the questions identified as "substantially compliant" in the April 2015 Corrective Action Plan.

2.1 Corrective Action related to Question 3.1.1

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
Question 3.1.1	Have facilities for unloading, storing, and mixing cyanide been designed and constructed in accordance with cyanide producers' guidelines, applicable jurisdictional rules and/or other sound and accepted engineering practices for these facilities?

2.1.1 Deficiencies

A finding of Substantial Compliance was assigned to Question 3.1.1 due to the following deficiency associated with the design and construction of the cyanide warehouse at the Process Plant.

At the time of the site visit for the initial certification in August 2014, the design and quality assurance/quality control (QA/QC) documentation related to the cyanide warehouse at the Process Plant could not be found; therefore, Pinos Altos commissioned an evaluation of the cyanide warehouse. The evaluation was completed by Omar Rodriguez, Projects and Construction Manager at Pinos Altos and professional engineer with Mexican "Cedula Profesional" No. 8524919. The evaluation was based on the requirements of the Construction Code of the City of Chihuahua and the requirements from the American Institute of Steel Construction (AISC) included in AISC-10-LRFD. The evaluation results showed that due to the lack of design and QA/QC documentation, and the number of assumptions used for the analysis, it was not possible to certify that the cyanide warehouse was designed and constructed based on local construction codes and AISC requirements. Based on these results, Pinos Altos decided to build a new cyanide warehouse at the Process Plant to replace the existing warehouse.

2.1.2 Corrective Actions Required

To support Full Compliance for this question, Pinos Altos was required to implement the following corrective actions:

- Construct a new cyanide warehouse facility to replace the existing one located in the Process Plant. This new facility will be designed and constructed based on sound and accepted engineering practices.
- Conduct and document QA/QC programs for the construction of the new cyanide warehouse at the Process Plant.



2.1.3 Evidence Required for Verification of Corrective Action Completion

To achieve Full Compliance for this question the following evidence was required:

- Photographs, by April 14, 2016, of the new cyanide warehouse constructed in the Process Plant area.
- Provide, by April 14, 2016, a copy of the design report, as-built drawings, and QA/QC documentation for the new cyanide warehouse, signed and approved by a qualified professional (such as professional engineer (with Mexican “Cedula Profesional” number, if applicable)).

2.1.4 Evidence Provided to Verify of Corrective Action Completion

Pinos Altos submitted the following evidence to the auditor to achieve full compliance under Question 3.1.1:

- Photographs of the new cyanide warehouse constructed in the Process Plant area.
- Structural Design Calculation Report, dated August 10, 2015. Prepared, signed and stamped by Omar Rodriguez, Projects and Construction Manager at Pinos Altos and professional engineer with Mexican “Cedula Profesional” No. 8524919.
- Issued for Construction Drawings, dated August 15, 2015. Prepared, sign and stamped by Omar Rodriguez, Projects and Construction Manager at Pinos Altos and professional engineer with Mexican “Cedula Profesional” No. 8524919.
- Quality Control, Geotechnical Report (Control de Calidad, Report Geotecnico) for the new cyanide warehouse, prepared by Lacosa Geotecnia, dated August 27, 2015, and signed by Engineer Francisco Ramirez Lujan. This report presents the results of a soil mechanics evaluation of the warehouse area and the warehouse design based on Mexican regulations (e.g., Manual de Diseño de Obras Civiles de la CFE).
- Report on Quality Certification Professional Services for the Cyanide Warehouse (“Servicios Profesionales de Certificacion de Calidad para el Proyecto “Almacen de Cianuro” ubicado en las Instalaciones de la Unidad Minera Pinos Altos, Cahuisori, Municipio de Ocampo, Chihuahua”), prepared by Geosols and dated February 28, 2016. This report describes the QA/QC program related to earthwork, steel, concrete and welding conducted for the new cyanide warehouse including testing results. The report also includes a list of the ASTM standards and Mexican construction standards used for the evaluation of the test results and photographs of the QA/QC activities. Testing included in-situ compaction, sieve analysis, determination of density and unit weight of soil, liquid limit, plastic limit and plasticity index of soils, moisture content, reinforced steel quality testing, compressive strength test on concrete cylinders, testing of hydraulic concrete, welding inspection, liquid penetrant testing and others. The report was signed by Geosols’s engineers as well as by professional engineer Omar Rodriguez, Projects and Construction Manager at Pinos Altos.

The evidence reviewed by the auditors confirmed that Pinos Altos has fully implemented the required corrective actions to achieve full compliance under Question 3.1.1.

2.1.5 Corrective Action Completion Date

Corrective action completion date: February 28, 2016.



2.2 Corrective Action related to Question 4.1.9

Standard of Practice 4.1 Implement management and operating systems designed to protect human health and the environment including contingency planning and inspection, and preventative maintenance procedures

Question 4.1.9 Are preventative maintenance programs implemented and activities documented to ensure that equipment and devices function as necessary for safe cyanide management?

2.2.1 Deficiencies

A finding of Substantial Compliance was assigned to Question 4.1.9 due to the following deficiency associated with the inappropriate implementation of maintenance programs of the cyanide facilities in an efficient and timely manner.

The auditors observed during the site visits that some of the pumps in the counter-current decantation (CCD) and Merrill Crowe areas leaked excessively. The average free cyanide concentration in the CCD and Merrill Crowe areas is approximately 280 and 470 ppm, respectively. The auditors reviewed maintenance records of these pumps to verify that they have been maintained as required. Even though the pump seals are readjusted to prevent leaks during weekly maintenance activities, the sealing systems of these pumps are continuously failing and therefore need to be replaced with a more efficient sealing system.

At the time the Detailed Audit Report³ was prepared, Pinos Altos was in the process of evaluating two different types of packing for these pumps (a Garlock packing and a Weir packing) and started testing of these two sealing system to evaluate the best option for the pumps.

2.2.2 Corrective Actions Required

To support Full Compliance for this question, Pinos Altos was required to implement the following corrective actions:

- Replace the sealing systems of the pumps presenting excessive and continuous leaks in the CCD and Merrill Crowe areas, and where this issue could not be addressed by regular maintenance activities (such as by adjusting the pump seals). The systems would be replaced with the option selected from the evaluation between a Garlock packing vs a Weir packing.
- Inspect the performance of the new sealing systems of the pumps as part of the daily inspections conducted by the Process Plant for a period of 3 months from the date of the installation of the new system.

³ Golder Associates Inc. (2015). ICMC Initial Certification Detailed Audit Report, Pinos Altos Mine, Chihuahua, Mexico. April 15.



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- Inspect the performance of the new sealing systems of the pumps as part of the weekly inspections conducted by the Maintenance Department for a period of 3 months from the date of the installation of the new system.

2.2.3 Evidence Required for Verification of Corrective Action Completion

To achieve Full Compliance for this question the following evidence was required:

- Photographs, by April 14, 2016, of the pumps with the new sealing systems showing no leaks and no formation of cyanide salts. The replacement of the sealing systems must be completed no later than late 2015 to allow enough time for monitoring the performance of the new system.
- PDF scans of completed daily inspection forms (by the Process Plant) for the pumps with the new sealing system for a period of 3 months from the date of the installation of the system.
- PDF scans of completed weekly inspection forms (by the Maintenance Department) for the pumps with the new sealing system for a period of 3 months from the date of the installation of the system.
- If any performance issues are identified as part of the inspections during the 3-month monitoring period, provide evidence of how these issues were addressed and resolved.

2.2.4 Evidence Provided to Verify of Corrective Action Completion

Pinos Altos submitted the following evidence to the auditor to achieve full compliance under Question 4.1.9:

- Photographs of the pumps in the CCD and Merrill Crowe areas showing the new Garlock packing system. This new system was installed in the pumps in the CCD and Merrill Crowe areas. No leaks and no formation of cyanide salts were observed in the photographs. The replacement of the sealing systems was completed between November and December 2015. November and December 2015 work orders associated with this replacement including completion dates were reviewed by the auditors to verify compliance.
- Photographs of the pumps in the CCD and Merrill Crowe areas also showed the installation of a steel tray (underneath the packing system of each pump) and of a hose between the tray and corresponding area sump in order to collect any leak that could occur in the packing system and direct it to the area sump. This was implemented as an additional corrective action to avoid the presence of any solution in the secondary containment of the pumps in case of a leak from the pump packing system.
- December 2, 2015, to March 15, 2016, completed daily inspection forms prepared by the Process Plant for the pumps with the new Garlock packing system. Completed forms entitled “Bombas Warman” and “Bombas Durco” were reviewed. The forms included the status of the pump packing systems. If any deficiency was observed, this deficiency was documented in the daily inspection forms and corrected as soon as possible. Completed work orders associated with the deficiencies observed during daily inspections of the pumps including completion dates were also reviewed to verify compliance.
- December 8, 2015, to March 15, 2016, completed weekly inspection forms entitled “Gamas Semanales” prepared by the Maintenance Department for the pumps with the new Garlock packing system. Deficiencies observed during maintenance were documented in the forms as well as the corrective action completion dates. Completed work orders associated with the deficiencies observed during weekly inspections of the pumps including completion dates were also reviewed to verify compliance.



- Based on the inspection forms and photographs submitted to the auditors as well as verbal information provided by Pinos Altos during conference calls with Golder in April 2016, the replacement of the sealing systems with a Garlock packing system has significantly improved the performance of the packing systems of the pumps in the CCD and Merrill Crowe areas. Leaks observed have been minor and associated with normal wear of the system. As mentioned in the items above, all deficiencies observed during maintenance and daily inspections, have been corrected as soon as possible as indicated in the completed work orders submitted to the auditors. Also, the installation of a steel tray (underneath the packing system of each pump) with a hose between the tray and the area sump in order to collect and direct any leak from the pump packing system has prevented the presence of cyanide solution in the secondary containments when a leak from the pump packing system has occurred. This corrective action was not included in the Corrective Action Plan but has been implemented by Pinos Altos as an act of good faith to reduce potential worker exposure to cyanide solution in the case of a leak from the pumping packing systems.

The evidence reviewed by the auditors confirmed that Pinos Altos has fully implemented the required corrective actions to achieve full compliance under Question 4.1.9.

2.2.5 Corrective Action Completion Date

Corrective action completion date: March 15, 2016.



2.3 Corrective Action related to Question 4.3.1

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

Question 4.3.1 Has the operation developed a comprehensive, probabilistic water balance?

2.3.1 Deficiencies

A finding of Substantial Compliance was assigned to Question 4.3.1 due to the following deficiency associated with water management programs of the cyanide facilities:

At the time of the initial certification audit, Pinos Altos had developed a probabilistic water balance model that tracks water flow throughout the heap leach facility (HLF). This model was prepared by Kappes, Cassidy & Associates (KCA) for sizing the ponds. However, Pinos Altos did not have a site-wide water balance that incorporates all the operational areas such as the Filters Pond and the Tailings Management Facility (TMF) including the Sedimentation Pond. Pinos Altos was in the process of developing this site-wide probabilistic water balance at the time of this audit. The Filters Pond was not considered as part of the original design of the mine facilities and was constructed as an addition to the process facilities. The Filters Pond receives the solution collected in the Excess Pond and the Sedimentation Pond and needed to be incorporated into the water balance. The site-wide water balance model was being developed using as a basis the design HLF water balance.

2.3.2 Corrective Actions Required

To support Full Compliance for this question, Pinos Altos was required to implement the following corrective actions:

- Complete the site-wide water balance model including the calibration phase of the model
- Summarize the model results in a technical memorandum including model input parameters for all process facilities considered in the model.

2.3.3 Evidence Required for Verification of Corrective Action Completion

To achieve Full Compliance for this question the following evidence was required:

- Conference call with the auditors (sharing screen during the call) to go over the site-wide water balance model. This needs to be accomplished by April 14, 2016.
- PDF scan of the technical memorandum summarizing the model inputs and results. This needs to be provided by April 14, 2016.



2.3.4 Evidence Provided to Verify of Corrective Action Completion

Pinos Altos submitted the following evidence to the auditor to achieve full compliance under Question 4.3.1:

- February 29, 2016, GoldSim Site-Wide Water Balance model (Player version) (file name: HL Water balance 2016 conditions_02.29.16.gsp). This model is an updated version of the 2014 partial site-wide water balance model reviewed during the initial certification site visit. The model includes all the operational areas including the dry stack TMF with the Sedimentation Pond and the Process Plant with the Filters Pond, cyanide facilities not included in the 2014 model.
- Conference call between Golder and Pinos Altos (sharing screen during the call) to go over the site-wide water balance model. The call was held on March 7, 2016.
- Technical Memorandum entitled “Cyanide Code – Standards of Practice 4.3.1 and 4.3.2, Updated from March 7 Revision”, dated March 16, 2016, and prepared by Alberto Avila, Head of the Hydrogeology Department at Pinos Altos. The memorandum summarizes the model inputs per facility, climate data, pond levels (in graphs) and calibration results. The model has been developed using the probabilistic simulation software GoldSim. The model considers the expected average rainfall plus a 100-year, 24-hour storm event (150 mm) superimposed on the facilities as well as the required pond freeboard. For the Process Plant with the Filters Pond, the model specifically includes inflows to the Plant (i.e., pregnant solution to the Process Plant (169.7 m³/day), makeup flow from fresh water, makeup flow from tailings filters and flow from the Filters Pond), outflows to the TMF and Filters Pond from the Process Plant, pond volume, required freeboard, evaporation, precipitation, inflows from the Excess Pond and the Sedimentation Pond of the TMF to the Filters Pond, and outflow from the Filters Pond to the Process Plant. For the TMF including the Sedimentation Pond, the model specifically includes runoff from TMF to the Sedimentation Pond, tailings area, tailings water content, seepage from the TMF to the Sedimentation Pond (0.1 m³/day), pond volume, pond area, evaporation, precipitation, required pond freeboard, and outflow from the Sedimentation Pond to the Filters Pond.

The evidence reviewed by the auditors confirmed that Pinos Altos has fully implemented the required corrective actions to achieve full compliance under Question 4.3.1.

2.3.5 Corrective Action Completion Date

Corrective Action Completion date: March 16, 2016.



2.4 Corrective Action related to Question 4.3.2

Standard of Practice 4.3	Implement a comprehensive water management program to protect against unintentional releases
Question 4.3.2	<p>Does the water balance consider the following in a reasonable manner and as appropriate for the facilities and the environment?</p> <ul style="list-style-type: none">a) The rates at which solutions are applied to leach pads and tailings that are deposited into tailings storage facilities.b) A design storm duration and storm return interval that provides a sufficient degree of probability that overtopping of the pond or impoundment can be prevented during the operational life of the facility.c) The quality of existing precipitation and evaporation data in representing actual site conditions.d) The amount of precipitation entering a pond or impoundment resulting from surface runoff from the up-gradient watershed, including adjustments as necessary to account for differences in elevation and for infiltration of the runoff into the ground.e) Effects of potential freezing and thawing conditions on the accumulation of precipitation within the facility and the up-gradient watershed.f) Solution losses in addition to evaporation, such as the capacity of the decant, drainage and recycling systems, allowable seepage to the subsurface, and allowable discharges to surface water.g) The effects of potential power outages or pump and other equipment failures on the drain down from a leach pad or the emergency removal of water from a facility.h) Where solution is discharged to surface waters, the capacity and on-line availability of necessary treatment, destruction or regeneration systems.i) Other aspects of facility design that can affect water balance, such as the assumed phreatic surface in a tailings storage facility.

2.4.1 Deficiencies

A finding of Substantial Compliance was assigned to Question 4.3.2 due to the following deficiency associated with the elements considered in the water management programs of the cyanide facilities:

Pinos Altos has a dry stack TMF. Since the site-wide water balance model was not completed at the time of the site visit, the auditors could not verify the parameters considered for the TMF such as water inflows for direct precipitation, recovered water from the dried tailings, water losses and others factors that could affect the water balance.



2.4.2 Corrective Actions Required

To support Full Compliance for this question, Pinos Altos was required to implement the following corrective actions:

- Complete the site-wide water balance model including the calibration phase of the model
- Summarize the model results in a technical memorandum including model input parameters for all process facilities considered in the model.

2.4.3 Evidence Required for Verification of Corrective Action Completion

To achieve Full Compliance for this question the following evidence was required:

- Conference call with the auditors (sharing screen during the call) to go over the site-wide water balance model. This needs to be accomplished by April 14, 2016.
- PDF scan of the technical memorandum summarizing the model inputs and results. This needs to be provided by April 14, 2016.

2.4.4 Evidence Provided to Verify of Corrective Action Completion

Pinos Altos submitted the following evidence to the auditor to achieve full compliance under Question 4.3.2:

- February 29, 2016, GoldSim Site-Wide Water Balance model (Player version) (file name: HL Water balance 2016 conditions_02.29.16.gsp). This model is an updated version of the 2014 partial site-wide water balance model reviewed during the initial certification audit. The model includes all the operational areas including the dry stack TMF with the Sedimentation Pond and the Filters Pond of the Process Plant, two cyanide facilities not included in the 2014 model.
- Conference call between Golder and Pinos Altos (sharing screen during the call) to go over the site-wide water balance model. The call was held on March 7, 2016.
- Technical Memorandum entitled “Cyanide Code – Standards of Practice 4.3.1 and 4.3.2, Updated from March 7 Revision”, dated March 16, 2016, and prepared by Alberto Avila, Head of the Hydrogeology Department at Pinos Altos. The memorandum summarizes the model inputs per facility, climate data, pond levels (in graphs) and calibration results. The model considers the following in a reasonable manner and as appropriate for the dry stack TMF with the Sedimentation Pond and the Process Plant with the Filters Pond:
 - The model considers runoff from the TMF to the Sedimentation Pond, tailings area, and seepage from the TMF to the Sedimentation Pond (0.1 m³/day).
 - The water balance incorporates a 100-year, 24-hour storm event (150 mm) superimposed on the system, which provides sufficiently conservative capacity criteria to prevent the potential for overtopping
 - The model uses the daily precipitation data from four onsite precipitation gages that are representative of the site (from July 2011 to the present) as well as precipitation data from a nearby station (Concheno Station from Conagua) with data available from 2000 to 2016. Evaporation data from two Pinos Altos stations (one located at the mine pit area and the other at the Mascota area) are also used for the model (data available since March 2014)



- Run-on from natural areas uphill from the TMF and the Process Plant is not included because all such areas are diverted.
- Freeze-thaw is a non-issue for this site due to local climate conditions.
- Seepage losses (0.1 m³/day) are considered for the TMF in the model.
- As discussed in the Detailed Audit Report, Pinos Altos has seven power generators to provide supply to the critical areas of the Process Plant (including the filtration area where the Filters Pond is located) and the TMF. Therefore, a power failure scenario for the process Plant was not necessary.
- Inapplicable because Pinos Altos does not discharge to surface water.
- No additional aspects are considered.

The evidence reviewed by the auditors confirmed that Pinos Altos has fully implemented the required corrective actions to achieve full compliance under Question 4.3.2.

2.4.5 Corrective Action Completion Date

Corrective Action Completion date: March 16, 2016.



2.5 Corrective Action related to Question 4.7.2

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

Question 4.7.2 Are secondary containments for cyanide unloading, storage, mixing and process tanks sized to hold a volume greater than that of the largest tank within the containment and any piping draining back to the tank, and with additional capacity for the design storm event?

2.5.1 Deficiencies

A finding of Substantial Compliance was assigned to Question 4.7.2 due to the following deficiencies associated with the capacity of secondary containments of the tanks.

KCA has evaluated the capacity of the secondary containments for the storage, mixing, and process tanks. The results of this evaluation show that the capacity of the secondary containments was found compliant with Code requirements with the exception of the capacity of the secondary containments for the Leach and CCD area and the Detox/Filtration area. The calculations showed that the volume of the secondary containment for the Leach and CCD area was 2,389 m³, which is approximately 93.9% of the volume of the largest tank within this containment. The volume of the secondary containment for the Detox/Filtration area was 2,642 m³, which is approximately 102.8% of the volume of the largest tank within this containment.

The auditors also observed the presence of cyanide solution in the secondary containment for the barren tank in the Merrill Crowe area. Cyanide solutions from the vacuum pump system were being discharged several times a day into the secondary containments as part of operational practices. The auditors did not consider this to be a good operational practice because of the potential for worker exposure and recommended that these discharges be directed into the secondary containment sump.

2.5.2 Corrective Actions Required

To support Full Compliance for this question, Pinos Altos was required to implement the following corrective actions:

- Make the modifications recommended by KCA to increase the capacity of the secondary containments for the Leach and CCD area and the Detox/Filtration area to 110% of the volume of the largest tank within these containments.
- Direct the cyanide solution flows from the vacuum pump system into the secondary containment sump.



2.5.3 Evidence Required for Verification of Corrective Action Completion

To achieve Full Compliance for this question the following evidence was required:

- Photographs, by April 14, 2016, of the modifications made to the secondary containments for the Leach and CCD area and the Detox/Filtration area.
- Calculations of the new capacity of the secondary containments for the Leach and CCD area and the Detox/Filtration area, demonstrating that these capacities are at least 110% of the volume of the largest tank within these containments.
- Photographs, by April 14, 2016, of the modifications made to the vacuum pump system to direct the flows (that are currently being discharged into the secondary containment) into the sump of the secondary containment in the Merrill Crowe area.

2.5.4 Evidence Provided to Verify of Corrective Action Completion

Pinos Altos submitted the following evidence to the auditor to achieve full compliance under Question 4.7.2:

- Photographs of the modifications made to the secondary containments for the Leach and CCD area (Area 530/550) and the Detox/Filtration area (Area 610/620). In the case of the secondary containment for the Leach and CCD area, a drain line from Area 530 to Area 520 (Grinding) has been installed to provide the additional required storage capacity. In the case of the secondary containment for the Detox/Filtration area, this secondary containment has been merged with the secondary containment of Area 590 (Flocculant Area) and the one of the Filter/Detox Area by eliminating the walls between secondary containments.
- Calculations of the new capacity of the secondary containments for the Leach and CCD area and the Detox/Filtration area, dated March 23, 2016. The calculations showed that the volume of the modified secondary containment for the Leach and CCD area (Area 530/550-520) is 3,403 m³, which is approximately 133.77% of the volume of the largest tank within this containment. The volume of the secondary containment for the modified Detox/Filtration area (Area 610/620-590-Filter/Detox) is 3,047 m³, which is approximately 118% of the volume of the largest tank within this containment.
- Photographs of the pipelines installed in the vacuum pump system to direct the flows (that were previously being discharged into the secondary containment) into the sump of the secondary containment in the Merrill Crowe area.

The evidence reviewed by the auditors confirmed that Pinos Altos has fully implemented the required corrective actions to achieve full compliance under Question 4.7.2.

2.5.5 Corrective Action Completion Date

Corrective Action Completion date: March 23, 2016.



2.6 Corrective Action related to Question 4.7.5

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

Question 4.7.5 Are spill prevention or containment measures provided for all cyanide process solution pipelines to collect leaks and prevent releases to the environment?

2.6.1 Deficiencies

A finding of Substantial Compliance was assigned to Question 4.7.5 due to the following deficiencies associated with the lack of secondary containment or spill prevention measures for pipelines.

The auditors noticed some segments of cyanide solution pipelines with either insufficient secondary containment, or without secondary containment, or without spill prevention measures. These pipeline segments include:

- The tailings pipeline from CCD thickener area to the Detox circuit. This pipeline does not have secondary containment or spill prevention measures and has a short segment buried.
- A short segment of the overhead pipeline from the milling area to the Acacia area. This is an overhead pipeline segment designed with a small steel tray in the bottom of the pipe that provides inadequate secondary containment. No concrete or other impermeable material is located underneath this segment of pipeline.
- A short segment of the overhead pipeline from the barren tank area to Merrill Crowe. This is an overhead pipeline segment located at the edge of the concrete secondary containment wall with inadequate secondary containment.
- The surface pipeline that transports the solution collected in the Excess Pond to the Filters Pond does not have secondary containment or spill prevention measures. The WAD cyanide concentration in the Excess Pond (that is the same concentration of the solution transported by this pipeline) was in average 48.9 mg/L (from May to July and October 2014).

Pinos Altos was in the process of evaluating different secondary containment options for these four pipeline segments at the time the Detailed Audit Report was prepared. Pinos Altos was also aware of the option to use spill prevention measures.

2.6.2 Corrective Actions Required

To support Full Compliance for this question, Pinos Altos was required to implement the following corrective actions:

- Provide appropriate secondary containment measures to the following 4 pipeline segments:
 - Tailings pipeline from CCD thickener area to the Detox circuit
 - A short segment of the pipeline from the milling area to the Acacia area
 - A short segment of the pipeline from the barren tank area to Merrill Crowe



- The pipeline that transports the solution collected in the Excess Pond to the Filters Pond
- Conduct and document any QA/QC programs required for the installation of the secondary containment measures (as applicable for each corrective action).

2.6.3 Evidence Required for Verification of Corrective Action Completion

To achieve Full Compliance for this question the following evidence was required:

- Photographs, by April 14, 2016, of the installation of the secondary containment measures for these 4 pipelines
- PDF scan, by April 14, 2016, of the QA/QC evidence (Photographs and laboratory testing results or letter from the engineer who oversaw the QA/QC) certifying that appropriate QA/QC programs have been conducted during the installation of the secondary containments (as applicable for each corrective action).

2.6.4 Evidence Provided to Verify of Corrective Action Completion

Pinos Altos submitted the following evidence to the auditor to achieve full compliance under Question 4.7.5:

- Report on Quality Certification Professional Services for the Installation of Secondary Containment for the Tailings Pipeline from CCD thickener to the Detox circuit (“Servicios Profesionales de Certificación de Calidad para el Proyecto “Trinchera Detox” ubicado en las Instalaciones de la Unidad Minera Pinos Altos, Cahuisori, Municipio de Ocampo, Chihuahua”), prepared by Geosols and dated April 13, 2016. This report describes the secondary containment facility installed for the segment of the tailings pipeline from the CCD thickener area to the Detox circuit with inadequate containment measures at the time of the site visit. Pinos Altos has installed a pipe-in-pipe system for this pipeline segment. In addition, reinforced concrete ditches with a metal screen have been constructed for the areas where this segment of the pipeline crosses an access road (one at the beginning of the segment and one at the end). In the areas where the pipe-pipe system joins the concrete ditches, two concrete boxes to capture spills have also constructed in the lowest spots of the pipe route. This report presents drawings of the secondary containment system and results of the QA/QC testing conducted during its construction. Photographs of the installation of this secondary containment system were also reviewed.
- Report on Quality Certification Professional Services for the Mill Concrete Pad (“Servicios Profesionales de Certificación de Calidad para el Proyecto “Losa Molinos” ubicado en las Instalaciones de la Unidad Minera Pinos Altos, Cahuisori, Municipio de Ocampo, Chihuahua”), prepared by Geosols and dated March 14, 2016. Pinos Altos has constructed a reinforced concrete secondary containment with a sump for the short segment of the pipeline from the milling area to the Acacia area with inadequate containment measures at the time of the initial certification audit. This report presents drawings of the secondary containment system and results of the QA/QC testing conducted during its construction. Photographs of the installation of this secondary containment system were also reviewed.
- Report on Quality Certification Professional Services for the Merrill Crowe Secondary Containment Wall (“Servicios Profesionales de Certificación de Calidad para el Proyecto “Muro de Contención Secundaria Merrill Crowe” ubicado en las Instalaciones de la Unidad Minera Pinos Altos, Cahuisori, Municipio de Ocampo, Chihuahua”), prepared by Geosols and dated March 3, 2016. Pinos Altos has modified the existing secondary containment of the barren tank area to add a steel wall based on a reinforced concrete foundations in order to provide adequate containment measures for the short segment of the overhead pipeline from the barren tank area to Merrill Crowe (located at the edge of



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the concrete secondary containment wall) with inadequate containment measures at the time of the site visit. This report presents drawings of the wall system and results of the QA/QC testing conducted during its construction. Photographs of the installation of this secondary containment wall system were also reviewed.

- For the pipeline that transports the solution collected in the Excess Pond to the Filters Pond, Pinos Altos has implemented spill prevention measures instead of containment measures including the following:
 - The use of the pipeline to transfer solution from Excess Pond to the Filters Pond during upset process conditions and abnormal weather conditions only. This pipeline has been used since January 2015 and will only be used in the future as a contingency facility and not as an operational facility as it was used at the time of the site visit. Pinos Altos has provided records of the number of transfers performed from the Excess Pond to the Filters Pond from January 2015 to the beginning of April 2016 to verify this. Transfers of a short duration period of time during the day have occurred in 15 days in September and October 2015, 2 days in November 2015, 22 days in December 2015, 22 days in January 2016, and 9 days in February 2016. Pinos Altos has informed that only rainwater accumulated in the Excess Pond has been transferred. The auditors have reviewed analytical WAD cyanide data from an external accredited laboratory (Analitica del Noroeste) collected at the Excess Pond from the period of January 2015 to February 2016 to verify this. WAD cyanide analytical data shows values below laboratory detection limit (<0.02 mg/L) with three detections of 0.02 mg/L on August 8, 2015, 4.63 mg/L on October 10, 2015, and 12.6 mg/L on November 4, 2015.
 - Daily inspections of the pipeline to check the condition of the pipeline and the presence of any spills along the pipeline. The auditors reviewed examples of completed daily inspection records from January 2015 to March 2016. Inspections were conducted even though the pipeline was not in use. The pipeline is uphill from the Excess Pond to the Filters Pond. Since this pipe is not buried, leaks would be easily visible and collected in the lowest area of the pipe. The transfers were conducted and will be conducted during the day only. No spills have occurred. Pinos Altos has developed and implemented a procedure for spill response reviewed as part of the initial audit (“Inspeccion and Control de Derrames” (PR-GP-OP-01-045-01), dated April 2014).
 - Pinos Altos has developed a procedure for the detoxification of the Excess Pond Solution using Hydrogen Peroxide to levels below 0.5 mg/L of WAD cyanide (“Procedimiento para Detoxificar Pileta de Emergencia, (PPO-455), dated December 2015). This procedure required that only detoxified solution will be transferred from the Excess Pond to the Filter Pond and has been implemented since December 2015. Since WAD cyanide concentrations in the Excess Pond were below laboratory detection limit (<0.02 mg/L) from December 2015 through February 2016 when transfers have occurred, no solution detoxification has been necessary so far. Pinos Altos has provided December 2015 training records related to this procedure to demonstrate that process personnel has received training and will implement this procedure as needed.
 - The auditors considered the evidence provided as acceptable spill prevention measures given the low concentrations of WAD cyanide in the solution (that have been transferred in 2015 and 2016, and that will be transferred in the future after detoxification), the high frequency of the inspections, the fact that this pipe is not buried and leaks would be easily visible, and that this pipe is being used since 2015 and will only be used in the future as a contingency facility and not as an operational facility.
- Report on Quality Certification Professional Services for the Merrill Crowe Sump (“Servicios Profesionales de Certificacion de Calidad para el Proyecto “Carcamo Merrill Crow” ubicado en las Instalaciones de la Unidad Minera Pinos Altos, Cahuisori, Municipio de Ocampo, Chihuahua”), prepared by Geosols and dated April 4, 2016. Pinos Altos has improved the containment measures in



the Merrill Crowe with the addition of a sump to the secondary containment system of this area. This improvement was not part of the required corrective actions, but has been done as part of improvements done to the operation to increase the capacity of the area sump. This report presents drawings of the new sump and results of the QA/QC testing conducted during its construction. Photographs of the installation of this secondary containment wall system were also reviewed.

- Report on Quality Certification Professional Services for the Compressor Concrete Pad (“Servicios Profesionales de Certificación de Calidad para el Proyecto “Losa de Compresores” ubicado en las Instalaciones de la Unidad Minera Pinos Altos, Cahuisori, Municipio de Ocampo, Chihuahua”), prepared by Geosols and dated March 11, 2016. Pinos Altos has improved the containment measures in the compressor area by constructing a reinforced concrete secondary containment in this area. This improvement was not part of the required corrective actions, but has been done as part of improvements conducted to the operation. This report presents drawings of the secondary containment and results of the QA/QC testing conducted during its construction. Photographs of the installation of this secondary containment wall system were also reviewed.

The evidence reviewed by the auditors confirmed that Pinos Altos has fully implemented the required corrective actions to achieve full compliance under Question 4.7.5.

2.6.5 Corrective Action Completion Date

Corrective Action Completion date: April 14, 2016.



2.7 Corrective Action related to Question 4.7.6

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

Question 4.7.6 Have areas where cyanide pipelines present a risk to surface water been evaluated for special protection needs?

2.7.1 Deficiencies

A finding of Substantial Compliance was assigned to Question 4.7.6 due to the following deficiencies associated with the lack of special protection needs for a pipeline segment.

The auditors observed that a short segment of the pipeline that transports the solution collected in the Excess Pond to the Filters Pond crosses a dry drainage, located immediately downstream of the Excess Pond. Runoff collected in this dry drainage would flow first into a small sedimentation pond (called “Pileta de Tierra”) and from there it would flow several kilometers downstream into one of the watercourses located downstream of the mine facilities, and therefore, this could present a risk to surface water in case of a spill. As indicated in the previous deficiency under Question 4.7.5, this pipeline does not have secondary containment measures and the average WAD cyanide concentration in the Excess Pond (that is the same concentration of the solution transported by this pipeline) was 48.9 mg/L (from May to July and October 2014).

2.7.2 Corrective Actions Required

To support Full Compliance for this question, Pinos Altos was required to implement the following corrective actions:

- Provide appropriate protection needs (such as secondary containment measures) for the pipeline that transports the solution collected in the Excess Pond to the Filters Pond.
- Conduct and document any QA/QC programs required for the installation of the secondary containment measure (as applicable).

2.7.3 Evidence Required for Verification of Corrective Action Completion

To achieve Full Compliance for this question the following evidence was required:

- Photographs, by April 14, 2016, of the installation of the secondary containment measures for this pipeline.
- PDF scan, by April 14, 2016, of the QA/QC evidence (Photographs and laboratory testing results or letter from the engineer who oversaw the QA/QC) certifying that appropriate QA/QC programs have been conducted during the installation of the secondary containment.



2.7.4 Evidence Provided to Verify of Corrective Action Completion

Pinos Altos submitted the following evidence to the auditor to achieve full compliance under Question 4.7.6:

- For the pipeline that transports the solution collected in the Excess Pond to the Filters Pond, Pinos Altos has implemented spill preventive measures instead of containment measures including the following:
 - The use of the pipeline to transfer solution from Excess Pond to the Filters Pond during upset process conditions and abnormal weather conditions only. This pipeline has been used since January 2015 and will only be used in the future as a contingency facility and not as an operational facility as it was used at the time of the initial certification audit. Pinos Altos has provided records of the number of transfers performed from the Excess Pond to the Filters Pond from January 2015 to the beginning of April 2016 to verify this. Transfers of a short duration period of time during the day have occurred in 15 days in September and October 2015, 2 days in November 2015, 22 days in December 2015, 22 days in January 2016, and 9 days in February 2016. Pinos Altos has informed that only rainwater accumulated in the Excess Pond has been transferred. The auditors have reviewed analytical WAD cyanide data from an external accredited laboratory (Analitica del Noroeste) collected at the Excess Pond from the period of January 2015 to February 2016 to verify this. WAD cyanide analytical data shows values below laboratory detection limit (<0.02 mg/L) with three detections of 0.02 mg/L on August 8, 2015, 4.63 mg/L on October 10, 2015, and 12.6 mg/L on November 4, 2015.
 - Daily inspections of the pipeline to check the condition of the pipeline and the presence of any spills along the pipeline. The auditors reviewed examples of completed daily inspection records from January 2015 to March 2016. Inspections were conducted even though the pipeline was not in use. The pipeline is uphill from the Excess Pond to the Filters Pond. Since this pipe is not buried, leaks would be easily visible and collected in the lowest area of the pipe. The transfers were conducted and will be conducted during the day only. No spills have occurred. Pinos Altos has developed and implemented a procedure for spill response reviewed as part of the initial audit (“Inspeccion and Control de Derrames” (PR-GP-OP-01-045-01), dated April 2014).
 - Pinos Altos has developed a procedure for the detoxification of the Excess Pond Solution using Hydrogen Peroxide to levels below 0.5 mg/L of WAD cyanide (“Procedimiento para Detoxificar Pileta de Emergencia, (PPO-455), dated December 2015). This procedure required that only detoxified solution will be transferred from the Excess Pond to the Filter Pond and has been implemented since December 2015. Since WAD cyanide concentrations in the Excess Pond were below laboratory detection limit (<0.02 mg/L) from December 2015 through February 2016 when transfers have occurred, no solution detoxification has been necessary so far. Pinos Altos has provided December 2015 training records related to this procedure to demonstrate that process personnel has received training and will implement this procedure as needed.
 - The auditors considered the evidence provided as acceptable spill prevention measures given the low concentrations of WAD cyanide in the solution (that have been transferred in 2015 and 2016, and that will be transferred in the future after detoxification), the high frequency of the inspections, the fact that this pipe is not buried and leaks would be easily visible, and that this pipe is being used since 2015 and will only be used in the future as a contingency facility and not as an operational facility.

The evidence reviewed by the auditors confirmed that Pinos Altos has fully implemented the required corrective actions to achieve full compliance under Question 4.7.6.



2.7.5 Corrective Action Completion Date

Corrective Action Completion date: April 14, 2016.



2.8 Corrective Action related to Question 4.8.1

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
Question 4.8.1	Have quality control and quality assurance programs been implemented during construction of all new cyanide facilities and modifications to existing facilities, including cyanide unloading, storage, mixing facilities, and other cyanide facilities?

2.8.1 Deficiencies

A finding of Substantial Compliance was assigned to Question 4.8.1 due to the following deficiencies associated with QA/QC documentation.

Pinos Altos needs to provide evidence of the QA/QC programs conducted for the TMF, Paste Backfill Plant, Filters Pond, pipelines from the Excess Pond and the Sedimentation Pond to the Filters Pond, and the expansion of the concrete pad in the cyanide mixing area at the Process Plant. In addition to these facilities, Pinos Altos will also need to provide evidence of the QA/QC programs to be conducted for the new cyanide warehouse at the Process Plant, and the placement of a secondary containment system for the tailings pipeline from CCD thickener to the Detox circuit, and for the pipeline from the Excess Pond to the Filters Pond, once these projects are completed. These projects will be conducted as part of corrective actions for other deficiencies.

2.8.2 Corrective Actions Required

To support Full Compliance for this question, Pinos Altos was required to implement the following corrective actions:

- Provide evidence of the QA/QC programs conducted for the TMF, Paste Backfill Plant, Filters Pond, pipelines from the Excess Pond and the Sedimentation Pond to the Filters Pond, and the expansion of the concrete pad in the cyanide mixing area at the Process Plant.
- Conduct and document QA/QC programs for the construction of the new cyanide warehouse at the Process Plant, and for the installation of secondary containment measures for the tailings pipeline from CCD thickener to the Detox circuit and for the pipeline from the Excess Pond to the Filters Pond.

2.8.3 Evidence Required for Verification of Corrective Action Completion

To achieve Full Compliance for this question the following evidence was required:

- PDF of the QA/QC evidence certifying that appropriate QA/QC programs have been conducted for all these facilities. The evidence may consist of photographs and laboratory testing results and/or a letter from the engineer who oversaw the QA/QC. The evidence must be provided by April 14, 2016, and must be signed and approved by a qualified professional (such as professional engineer (with Mexican "Cedula Profesional" number, if applicable)).



2.8.4 Evidence Provided to Verify of Corrective Action Completion

Pinos Altos submitted the following evidence to the auditor to achieve full compliance under Question 4.8.1:

Existing facilities at the time of the certification audit:

- Certification Letter on Quality of the Installation of the Pipeline from the Sedimentation Pond to the Filters Pond (“Constancia de Certificacion de Calidad en la Instalacion de Tuberia Jales-Filtros”), prepared by Geosols, dated March 24, 2016. This letter is signed by qualified Engineer Jose Carlos Montero de Anda, Geosols General Director (with Mexican “Cedula Profesional” No. 6853118).
- Report on Quality Certification Professional Services for the Pipeline from the Sedimentation Pond to the Filters Pond (“Servicios Profesionales de Certificacion de Calidad para el Proyecto “Tuberia Jales-Filtros” ubicado en las Instalaciones de la Unidad Minera Pinos Altos, Cahuisori, Municipio de Ocampo, Chihuahua”), prepared by Geosols, dated March 24, 2016. This report is signed by qualified Engineer Jose Carlos Montero de Anda, Geosols General Director (with Mexican “Cedula Profesional” No. 6853118) and approved by professional engineer Omar Rodriguez, Projects and Construction Manager at Pinos Altos (with Mexican “Cedula Profesional” No. 8524919).
- Report on Quality Certification Professional Services for the Concrete Pad in the Cyanide Mixing Area (“Servicios Profesionales de Certificacion de Calidad para el Proyecto “Losa Preparacion de Cianuro” ubicado en las Instalaciones de la Unidad Minera Pinos Altos, Cahuisori, Municipio de Ocampo, Chihuahua”), prepared by Geosols, dated March 21, 2016. This report is signed by qualified Engineer Luis Morales, Geosols General Manager and approved by professional engineer Omar Rodriguez, Projects and Construction Manager at Pinos Altos (with Mexican “Cedula Profesional” No. 8524919).
- Certification Letter on Construction Quality for the Paste Backfill Plant (“Constancia de Certificacion de Calidad en la Construccion Planta de Pasta”), prepared by Geosols, dated March 23, 2016. This letter is signed by qualified Engineer Jose Carlos Montero de Anda, Geosols General Director (with Mexican “Cedula Profesional” No. 6853118).
- Report on Quality Certification Professional Services for the Paste Backfill Plant (“Servicios Profesionales de Certificacion de Calidad para el Proyecto “Planta Pasta” ubicado en las Instalaciones de la Unidad Minera Pinos Altos, Cahuisori, Municipio de Ocampo, Chihuahua”), prepared y Geosols, dated March 9, 2016. This report is signed by qualified Engineer Luis Enrique Morales, Geosols General Manager and approved by professional engineer Omar Rodriguez, Projects and Construction Manager at Pinos Altos (with Mexican “Cedula Profesional” No. 8524919).
- Certification Letter on the Design and QA/QC Construction for the TMF (“Constancia de Supervision del Diseño y Construccion-QA/QC de la Presa de Jales Seca”), prepared by KCA and dated March 23, 2016. This letter is signed by qualified Engineer Pedro Rosas Valenzuela (with Mexican “Cedula Profesional” No. 5321690).
- Report on Quality Certification Professional Services for the Pipeline from the Excess Pond to the Filters Pond (“Servicios Profesionales de Certificacion de Calidad para el Proyecto “Tubería Pileta de Emergencias – Pileta Filtros” ubicado en las Instalaciones de la Unidad Minera Pinos Altos, Cahuisori, Municipio de Ocampo, Chihuahua”), prepared by Geosols and dated Abril 2016. This report is signed by qualified Engineer Jose Carlos Montero de Anda, Geosols General Director (with Mexican “Cedula Profesional” No. 6853118).
- Geotechnical Study to Review Pinos Altos Mine Ponds (Estudio Geotecnico para la Revisión de las Piletas en la Mina Pinos Altos en Cahuisori, Chih.) including Filters Pond, prepared by Geosols, February 2016. This report is signed by qualified Engineer Luis Morales, Geosols General Manager



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and qualified Engineer Jose Carlos Montero de Anda, Geosols General Director (with Mexican “Cedula Profesional” No. 6853118).

- Report on Air and Vacuum Pressure Testing at Filters Pond (“Reporte de Pruebas de Presion de Aire y Vacio”), prepared by Soluciones Ambientales and dated March 2016. This report is signed by Raul Irineo Valentin, qualified Supervisor at Soluciones Ambientales, and approved by professional engineer Omar Rodriguez, Projects and Construction Manager at Pinos Altos (with Mexican “Cedula Profesional” No. 8524919).
- March 2016 letter prepared by Soluciones Ambientales certifying the QA/QC testing performed for the Filters Pond Liner System (1134 Carta trabajos de control de calidad_filterPond.pdf). This letter is an addendum to the previous report.

New facilities since certification audit or modifications to existing facilities at the time of the certification audit related to secondary containment measures as discussed in Corrective Action related to Question 4.7.5:

- Report on Quality Certification Professional Services for the Cyanide Warehouse (“Servicios Profesionales de Certificacion de Calidad para el Proyecto “Almacen de Cianuro” ubicado en las Instalaciones de la Unidad Minera Pinos Altos, Cahuisori, Municipio de Ocampo, Chihuahua”), prepared by Geosols and dated February 28, 2016. This report is signed by qualified Engineer Luis Enrique Morales, Geosols General Manager and approved by professional engineer Omar Rodriguez, Projects and Construction Manager at Pinos Altos (with Mexican “Cedula Profesional” No. 8524919).
- Report on Quality Certification Professional Services for the Mill Concrete Pad (“Servicios Profesionales de Certificacion de Calidad para el Proyecto “Losa Molinos” ubicado en las Instalaciones de la Unidad Minera Pinos Altos, Cahuisori, Municipio de Ocampo, Chihuahua”), prepared by Geosols and dated March 14, 2016. This report is signed by qualified Engineer Luis Enrique Morales, Geosols General Manager and approved by professional engineer Omar Rodriguez, Projects and Construction Manager at Pinos Altos (with Mexican “Cedula Profesional” No. 8524919).
- Report on Quality Certification Professional Services for the Merrill Crowe Secondary Containment Wall (“Servicios Profesionales de Certificacion de Calidad para el Proyecto “Muro de Contencion Secundaria Merrill Crowe” ubicado en las Instalaciones de la Unidad Minera Pinos Altos, Cahuisori, Municipio de Ocampo, Chihuahua”), prepared by Geosols and dated March 3, 2016. This report is signed by qualified Engineer Luis Enrique Morales, Geosols General Manager and approved by professional engineer Omar Rodriguez, Projects and Construction Manager at Pinos Altos (with Mexican “Cedula Profesional” No. 8524919).
- Report on Quality Certification Professional Services for the Installation of Secondary Containment for the Tailings Pipeline from CCD thickener to the Detox circuit (“Servicios Profesionales de Certificacion de Calidad para el Proyecto “Trinchera Detox” ubicado en las Instalaciones de la Unidad Minera Pinos Altos, Cahuisori, Municipio de Ocampo, Chihuahua”), prepared by Geosols and dated April 13, 2016. This report is signed by qualified Engineer Luis Enrique Morales, Geosols General Manager and approved by professional engineer Omar Rodriguez, Projects and Construction Manager at Pinos Altos (with Mexican “Cedula Profesional” No. 8524919).
- Report on Quality Certification Professional Services for the Merrill Crowe Sump (“Servicios Profesionales de Certificacion de Calidad para el Proyecto “Carcamo Merrill Crow” ubicado en las Instalaciones de la Unidad Minera Pinos Altos, Cahuisori, Municipio de Ocampo, Chihuahua”), prepared by Geosols and dated April 4, 2016. This report is signed by qualified Engineer Luis Enrique Morales, Geosols General Manager and approved by professional engineer Omar Rodriguez, Projects and Construction Manager at Pinos Altos (with Mexican “Cedula Profesional” No. 8524919).



- Report on Quality Certification Professional Services for the Compressor Concrete Pad (“Servicios Profesionales de Certificación de Calidad para el Proyecto “Losa de Compresores” ubicado en las Instalaciones de la Unidad Minera Pinos Altos, Cahuisori, Municipio de Ocampo, Chihuahua”), prepared by Geosols and dated March 11, 2016. This report is signed by qualified Engineer Luis Enrique Morales, Geosols General Manager and approved by professional engineer Omar Rodriguez, Projects and Construction Manager at Pinos Altos (with Mexican “Cedula Profesional” No. 8524919).
- Since spill preventive measures were implemented for the pipeline from the Excess Pond to the Filters Pond instead of secondary containment measures as indicated in Corrective Action related to Question 4.7.5, the need of QA/QC documentation evidence related to this is not applicable.

The evidence reviewed by the auditors confirmed that Pinos Altos has fully implemented the required corrective actions to achieve full compliance under Question 4.8.1.

2.8.5 Corrective Action Completion Date

Corrective Action Completion date: April 13, 2016.



2.9 Corrective Action related to Question 4.8.2

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
Question 4.8.2	Have quality control and quality assurance programs addressed the suitability of materials and adequacy of soil compaction for earthworks such as tank foundations and earthen liners, the installation of synthetic membrane liners used in ponds and leach pads and for construction of cyanide storage and process tanks?

2.9.1 Deficiencies

A finding of Substantial Compliance was assigned to Question 4.8.2 due to the following deficiencies associated with the activities addressed in the QA/QC programs.

As discussed in the deficiency related to Question 4.8.1, Pinos Altos needs to provide evidence of the QA/QC programs conducted for the TMF, Paste Backfill Plant, Filters Pond, pipelines from the Excess Pond and the Sedimentation Pond to the Filters Pond, the expansion of the concrete pad in the cyanide mixing area at the Process Plant, the construction of the new cyanide warehouse at the Process Plant and the installation of a secondary containment system for the tailings pipeline from CCD thickener to the Detox circuit. Once the evidence is provided to the auditors, the auditors will be able to verify if the QA/QC programs for these facilities have addressed the suitability of materials and adequacy of soil compaction for earthworks, the installation of synthetic membrane liners and the concrete, and others, as applicable for each type of facility.

2.9.2 Corrective Actions Required

To support Full Compliance for this question, Pinos Altos was required to implement the following corrective actions:

- Provide evidence of the QA/QC programs conducted for the TMF, Paste Backfill Plant, Filters Pond, pipelines from the Excess Pond and the Sedimentation Pond to the Filters Pond, and the expansion of the concrete pad in the cyanide mixing area at the Process Plant.
- Conduct and document QA/QC programs for the construction of the new cyanide warehouse at the Process Plant, and for the installation of secondary containment measures for the tailings pipeline from CCD thickener to the Detox circuit and for the pipeline from the Excess Pond to the Filters Pond.

2.9.3 Evidence Required for Verification of Corrective Action Completion

To achieve Full Compliance for this question the following evidence was required:

- PDF of the QA/QC evidence (Photographs and laboratory testing results or letter from the engineer who oversaw the QA/QC) describing the QA/QC activities addressed such as the suitability of materials and adequacy of soil compaction for earthworks, the installation of synthetic membrane liners and the concrete, and others, as applicable for each type of facility. The evidence must be provided by April 14, 2016.



2.9.4 Evidence Provided to Verify of Corrective Action Completion

Pinos Altos submitted the following evidence to the auditor to achieve full compliance under Question 4.8.2:

Existing facilities at the time of the certification audit:

- Report on Quality Certification Professional Services for the Pipeline from the Sedimentation Pond to the Filters Pond (“Servicios Profesionales de Certificacion de Calidad para el Proyecto “Tuberia Jales-Filtros” ubicado en las Instalaciones de la Unidad Minera Pinos Altos, Cahuisori, Municipio de Ocampo, Chihuahua”), prepared by Geosols, dated March 24, 2016. This report includes results of the QA/QC testing conducted for the Pipeline from the Sedimentation Pond to the Filters Pond. Testing included visual inspection and no destructive liquid penetrant testing. Photographs of the testing were also included.
- Report on Quality Certification Professional Services for the Concrete Pad in the Cyanide Mixing Area (“Servicios Profesionales de Certificacion de Calidad para el Proyecto “Losa Preparacion de Cianuro” ubicado en las Instalaciones de la Unidad Minera Pinos Altos, Cahuisori, Municipio de Ocampo, Chihuahua”), prepared by Geosols, dated March 21, 2016. This report includes results of QA/QC testing conducted for the Merrill Crowe Secondary Containment Wall. Testing included in-situ compaction, sieve analysis, determination of density and unit weight of soil, liquid limit, plastic limit and plasticity index of soils, moisture content, reinforced steel quality testing, compressive strength test on concrete cylinders and testing of hydraulic concrete. Photographs of the testing were also included.
- Report on Quality Certification Professional Services for the Paste Backfill Plant (“Servicios Profesionales de Certificacion de Calidad para el Proyecto “Planta Pasta” ubicado en las Instalaciones de la Unidad Minera Pinos Altos, Cahuisori, Municipio de Ocampo, Chihuahua”), prepared by Geosols, dated March 9, 2016. This report includes the results of the evaluation and testing conducted by Geosols to confirm that this plant was designed and constructed based on sound and accepted engineering practices as indicated in the Certification Letter on Construction Quality for the Paste Backfill Plant. Testing included visual welding inspection and sclerometer testing on concrete. Photographs of the testing were also included.
- Certification Letter on the Design and QA/QC Construction for the TMF (“Constancia de Supervision del Diseño y Construcción-QA/QC de la Presa de Jales Seca”), prepared by KCA and dated March 23, 2016. The letter states that KCA oversaw all phases of the construction of the TMF, including QA/QC activities related to earth movement, subdrain system, pipeline installation, material stacking, diversion channel, and others. The letter also states that all QA/QC activities met QA/QCQ construction standards.
- Report on Quality Certification Professional Services for the Pipeline from the Excess Pond to the Filters Pond (“Servicios Profesionales de Certificacion de Calidad para el Proyecto “Tubería Pileta de Emergencias – Pileta Filtros” ubicado en las Instalaciones de la Unidad Minera Pinos Altos, Cahuisori, Municipio de Ocampo, Chihuahua”), prepared by Geosols and dated April 2016. This report includes results of the QA/QC testing conducted for the Pipeline from the Excess Pond to the Filters Pond. Testing included visual inspection and no destructive liquid penetrant testing. Photographs of the testing were also included.
- Geotechnical Study to Review Pinos Altos Mine Ponds (Estudio Geotecnico para la Revision de las Piletas en la Mina Pinos Altos en Cahuisori, Chih.) including Filters Pond, prepared by Geosols, February 2016. This report includes the results of the soil testing, stability analyses for soil foundation and slope related to the Filter Pond.



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- Report on Air and Vacuum Pressure Testing at Filters Pond (“Reporte de Pruebas de Presion de Aire y Vacio”), prepared by Soluciones Ambientales and dated March 2016. This report includes the results of the air and vacuum pressure testing.
- March 2016 letter prepared by Soluciones Ambientales certifying the QA/QC testing performed for the Filters Pond Liner System (1134 Carta trabajos de control de calidad_filterPond.pdf). Testing included seam testing and air and vacuum pressure testing.

New facilities since certification audit or modifications to existing facilities at the time of the certification audit related to secondary containment measures as discussed in Corrective Action related to Question 4.7.5:

- Report on Quality Certification Professional Services for the New Cyanide Warehouse (“Servicios Profesionales de Certificacion de Calidad para el Proyecto “Almacen de Cianuro” ubicado en las Instalaciones de la Unidad Minera Pinos Altos, Cahuisori, Municipio de Ocampo, Chihuahua”), prepared by Geosols and dated February 28, 2016. This report includes results of QA/QC testing conducted for the new cyanide warehouse. Testing included in-situ compaction, sieve analysis, determination of density and unit weight of soil, liquid limit, plastic limit and plasticity index of soils, moisture content, reinforced steel quality testing, compressive strength test on concrete cylinders, testing of hydraulic concrete, welding inspection, liquid penetrant testing and others. Photographs of the testing were also included.
- Report on Quality Certification Professional Services for the Mill Concrete Pad (“Servicios Profesionales de Certificacion de Calidad para el Proyecto “Losa Molinos” ubicado en las Instalaciones de la Unidad Minera Pinos Altos, Cahuisori, Municipio de Ocampo, Chihuahua”), prepared by Geosols and dated March 14, 2016. This report includes results of QA/QC testing conducted for the Mill Concrete Pad. Testing included in-situ compaction, sieve analysis, determination of density and unit weight of soil, liquid limit, plastic limit and plasticity index of soils, moisture content, reinforced steel quality testing, compressive strength test on concrete cylinders, testing of hydraulic concrete, welding inspection, and liquid penetrant testing. Photographs of the testing were also included.
- Report on Quality Certification Professional Services for the Merrill Crowe Secondary Containment Wall (“Servicios Profesionales de Certificacion de Calidad para el Proyecto “Muro de Contencion Secundaria Merrill Crowe” ubicado en las Instalaciones de la Unidad Minera Pinos Altos, Cahuisori, Municipio de Ocampo, Chihuahua”), prepared by Geosols and dated March 3, 2016. This report includes results of QA/QC testing conducted for the Merrill Crowe Secondary Containment Wall. Testing included in-situ compaction, sieve analysis, determination of density and unit weight of soil, liquid limit, plastic limit and plasticity index of soils, moisture content, reinforced steel quality testing, compressive strength test on concrete cylinders and testing of hydraulic concrete. Photographs of the testing were also included.
- Report on Quality Certification Professional Services for the Installation of Secondary Containment for the Tailings Pipeline from CCD Thickener to the Detox Circuit (“Servicios Profesionales de Certificacion de Calidad para el Proyecto “Trinchera Detox” ubicado en las Instalaciones de la Unidad Minera Pinos Altos, Cahuisori, Municipio de Ocampo, Chihuahua”), prepared by Geosols and dated April 13, 2016. This report includes results of QA/QC testing conducted for the installation of secondary containment for the tailings pipeline from CCD thickener to the Detox circuit. Testing included reinforced steel quality testing, compressive strength test on concrete cylinders, testing of hydraulic concrete, testing for standards for heat fusion joining of polyolefin pipe and fitting, visual pipe welding inspection and liquid penetrant testing. Photographs of the testing were also included.
- Report on Quality Certification Professional Services for the Merrill Crowe Sump (“Servicios Profesionales de Certificacion de Calidad para el Proyecto “Carcamo Merrill Crow” ubicado en las



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Instalaciones de la Unidad Minera Pinos Altos, Cahuisori, Municipio de Ocampo, Chihuahua”), prepared by Geosols and dated April 4, 2016. This report includes results of QA/QC testing conducted for the Merrill Crowe Sump. Testing included in-situ compaction, sieve analysis, determination of density and unit weight of soil, liquid limit, plastic limit and plasticity index of soils, moisture content, reinforced steel quality testing, compressive strength test on concrete cylinders, testing of hydraulic concrete and welding inspection. Photographs of the testing were also included.

- Report on Quality Certification Professional Services for the Compressor Concrete Pad (“Servicios Profesionales de Certificación de Calidad para el Proyecto “Losa de Compresores” ubicado en las Instalaciones de la Unidad Minera Pinos Altos, Cahuisori, Municipio de Ocampo, Chihuahua”), prepared by Geosols and dated March 11, 2016. This report includes results of QA/QC testing conducted for the compressor concrete pad. Testing included in-situ compaction, sieve analysis, determination of density and unit weight of soil, liquid limit, plastic limit and plasticity index of soils, moisture content, reinforced steel quality testing, compressive strength test on concrete cylinders and testing of hydraulic concrete. Photographs of the testing were also included.
- Since spill prevention measures were implemented for the pipeline from the Excess Pond to the Filters Pond instead of secondary containment measures as indicated in Corrective Action related to Question 4.7.5, the need of QA/QC documentation evidence related to this is not applicable.

The evidence reviewed by the auditors confirmed that Pinos Altos has fully implemented the required corrective actions to achieve full compliance under Question 4.8.2.

2.9.5 Corrective Action Completion Date

Corrective Action Completion date: April 13, 2016.



2.10 Corrective Action related to Question 4.8.3

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

Question 4.8.3 Have quality control and quality assurance records been retained for cyanide facilities?

2.10.1 Deficiencies

A finding of Substantial Compliance has been determined for Question 4.8.3 due to the following deficiencies associated with retaining QA/QC documentation.

Pinos Altos has not retained QA/QC documentation for the TMF, Paste Backfill Plant, Filters Pond, pipelines from the Excess Pond and the Sedimentation Pond to the Filters Pond and the expansion of the concrete pad in the cyanide mixing area at the Process Plant.

2.10.2 Corrective Actions Required

To support Full Compliance for this question, Pinos Altos was required to implement the following corrective actions:

- Provide evidence of the QA/QC programs conducted for the TMF, Paste Backfill Plant, Filters Pond, pipelines from the Excess Pond and the Sedimentation Pond to the Filters Pond, and the expansion of the concrete pad in the cyanide mixing area at the Process Plant.
- Conduct and document QA/QC programs for the construction of the new cyanide warehouse at the Process Plant, and for the installation of secondary containment measures for the tailings pipeline from CCD thickener to the Detox circuit and for the pipeline from the Excess Pond to the Filters Pond. Retain records of these QA/QC programs.

2.10.3 Evidence Required for Verification of Corrective Action Completion

To achieve Full Compliance for this question the following evidence was required:

- PDF of the QA/QC evidence (i.e., photographs and laboratory testing results or letter from the engineer who oversaw the QA/QC programs) by April 14, 2016.

2.10.4 Evidence Provided to Verify of Corrective Action Completion

Pinos Altos submitted the following evidence to the auditor to achieve full compliance under Question 4.8.3:

Existing facilities at the time of the certification audit:

- Certification Letter on Quality of the Installation of the Pipeline from the Sedimentation Pond to the Filters Pond (“Constancia de Certificacion de Calidad en la Instalacion de Tuberia Jales-Filtros”), prepared by Geosols, dated March 24, 2016.



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- Report on Quality Certification Professional Services for the Pipeline from the Sedimentation Pond to the Filters Pond (“Servicios Profesionales de Certificacion de Calidad para el Proyecto “Tuberia Jales-Filtros” ubicado en las Instalaciones de la Unidad Minera Pinos Altos, Cahuisori, Municipio de Ocampo, Chihuahua”), prepared by Geosols, dated March 24, 2016.
- Report on Quality Certification Professional Services for the Concrete Pad in the Cyanide Mixing Area (“Servicios Profesionales de Certificacion de Calidad para el Proyecto “Losa Preparacion de Cianuro” ubicado en las Instalaciones de la Unidad Minera Pinos Altos, Cahuisori, Municipio de Ocampo, Chihuahua”), prepared by Geosols, dated March 21, 2016.
- Certification Letter on Construction Quality for the Paste Backfill Plant (“Constancia de Certificacion de Calidad en la Construccion Planta de Pasta”), prepared by Geosols, dated March 23, 2016.
- Report on Quality Certification Professional Services for the Paste Backfill Plant (“Servicios Profesionales de Certificacion de Calidad para el Proyecto “Planta Pasta” ubicado en las Instalaciones de la Unidad Minera Pinos Altos, Cahuisori, Municipio de Ocampo, Chihuahua”), prepared y Geosols, dated March 9, 2016.
- Certification Letter on the Design and QA/QC Construction for the TMF (“Constancia de Supervision del Diseño y Construccion-QA/QC de la Presa de Jales Seca”), prepared by KCA and dated March 23, 2016.
- Report on Quality Certification Professional Services for the Pipeline from the Excess Pond to the Filters Pond (“Servicios Profesionales de Certificacion de Calidad para el Proyecto “Tubería Pileta de Emergencias – Pileta Filtros” ubicado en las Instalaciones de la Unidad Minera Pinos Altos, Cahuisori, Municipio de Ocampo, Chihuahua”), prepared by Geosols and dated April 2016.
- Geotechnical Study to Review Pinos Altos Mine Ponds (Estudio Geotecnico para la Revisión de las Piletas en la Mina Pinos Altos en Cahuisori, Chih.) including Filters Pond, prepared by Geosols, February 2016
- Report on Air and Vacuum Pressure Testing at Filters Pond (“Reporte de Pruebas de Presion de Aire y Vacio”), prepared by Soluciones Ambientales and dated March 2016
- March 2016 letter prepared by Soluciones Ambientales certifying the QA/QC testing performed for the Filters Pond Liner System (1134 Carta trabajos de control de calidad_filterPond.pdf)

New facilities since certification audit or modifications to existing facilities at the time of the certification audit related to secondary containment measures as discussed in Corrective Action related to Question 4.7.5:

- Report on Quality Certification Professional Services for the Cyanide Warehouse (“Servicios Profesionales de Certificacion de Calidad para el Proyecto “Almacen de Cianuro” ubicado en las Instalaciones de la Unidad Minera Pinos Altos, Cahuisori, Municipio de Ocampo, Chihuahua”), prepared by Geosols and dated February 28, 2016.
- Report on Quality Certification Professional Services for the Mill Concrete Pad (“Servicios Profesionales de Certificacion de Calidad para el Proyecto “Losa Molinos” ubicado en las Instalaciones de la Unidad Minera Pinos Altos, Cahuisori, Municipio de Ocampo, Chihuahua”), prepared by Geosols and dated March 14, 2016.
- Report on Quality Certification Professional Services for the Merrill Crowe Secondary Containment Wall (“Servicios Profesionales de Certificacion de Calidad para el Proyecto “Muro de Contencion Secundaria Merrill Crowe” ubicado en las Instalaciones de la Unidad Minera Pinos Altos, Cahuisori, Municipio de Ocampo, Chihuahua”), prepared by Geosols and dated March 3, 2016.



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- Report on Quality Certification Professional Services for the Installation of Secondary Containment for the Tailings Pipeline from CCD thickener to the Detox circuit (“Servicios Profesionales de Certificación de Calidad para el Proyecto “Trinchera Detox” ubicado en las Instalaciones de la Unidad Minera Pinos Altos, Cahuisori, Municipio de Ocampo, Chihuahua”), prepared by Geosols and dated April 13, 2016.
- Report on Quality Certification Professional Services for the Merrill Crowe Sump (“Servicios Profesionales de Certificación de Calidad para el Proyecto “Carcamo Merrill Crow” ubicado en las Instalaciones de la Unidad Minera Pinos Altos, Cahuisori, Municipio de Ocampo, Chihuahua”), prepared by Geosols and dated April 4, 2016.
- Report on Quality Certification Professional Services for the Compressor Concrete Pad (“Servicios Profesionales de Certificación de Calidad para el Proyecto “Losa de Compresores” ubicado en las Instalaciones de la Unidad Minera Pinos Altos, Cahuisori, Municipio de Ocampo, Chihuahua”), prepared by Geosols and dated March 11, 2016.
- Since spill preventive measures were implemented for the pipeline from the Excess Pond to the Filters Pond instead of secondary containment measures as indicated in Corrective Action related to Question 4.7.5, the need of QA/QC documentation evidence related to this is not applicable.

The evidence reviewed by the auditors confirmed that Pinos Altos has fully implemented the required corrective actions to achieve full compliance under Question 4.8.3.

2.10.5 Corrective Action Completion Date

Corrective Action Completion date: April 13, 2016.



Report Signature Page

GOLDER ASSOCIATES INC.

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Lead Auditor and Mining Technical Specialist

Ivon Aguinaga
Mining Technical Specialist
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Date: April 27, 2016

IA/BP

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