



REPORT

ICMC INITIAL CERTIFICATION SUMMARY AUDIT REPORT

La Herradura Mine Dynamic Leaching Plant, Sonora, Mexico

Submitted to:

International Cyanide Management Institute (ICMI)

1400 I Street, NW - Suite 550
Washington, DC 20005
United States of America

Submitted by:

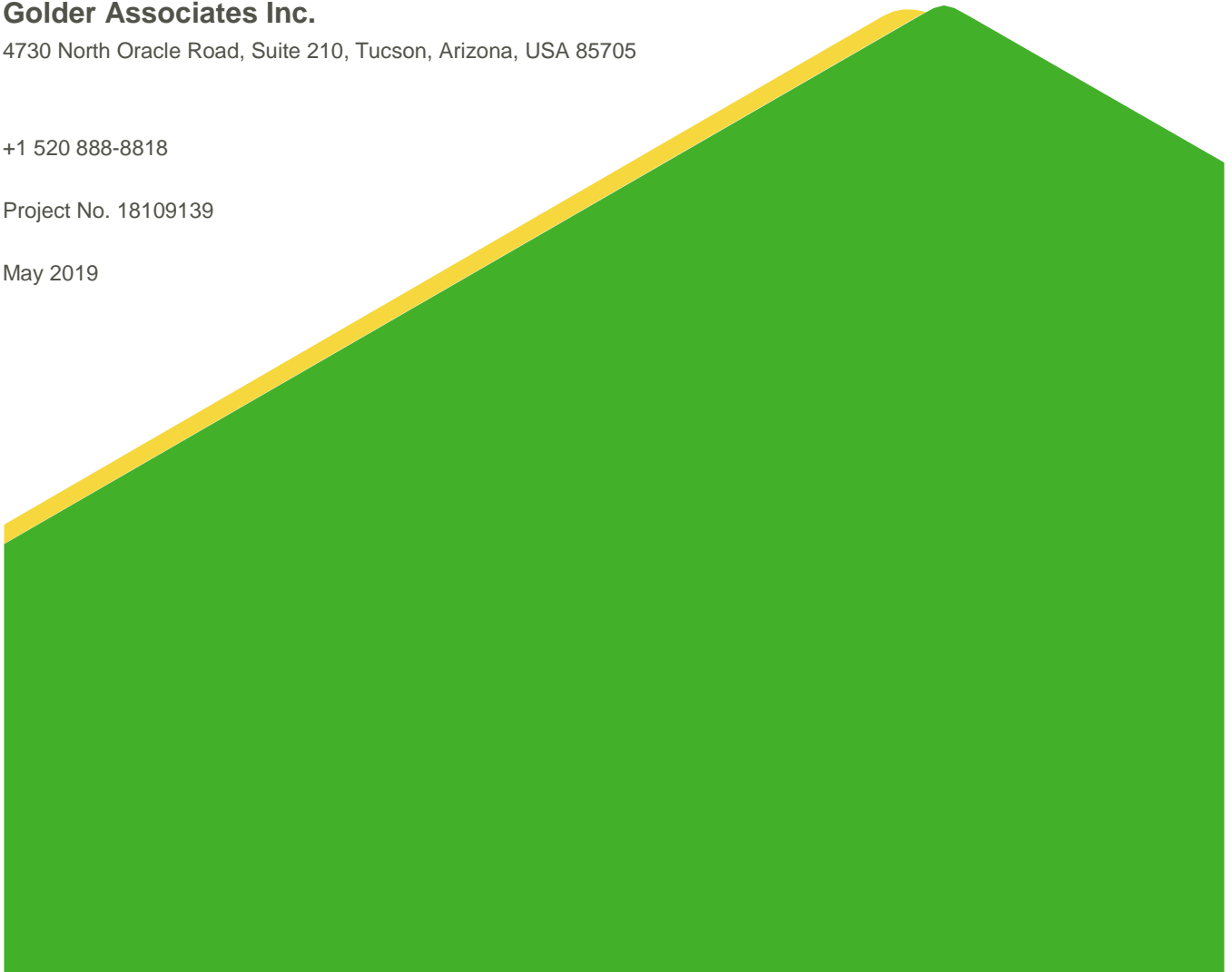
Golder Associates Inc.

4730 North Oracle Road, Suite 210, Tucson, Arizona, USA 85705

+1 520 888-8818

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Distribution List

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1.0 SUMMARY AUDIT REPORT FOR GOLD AND SILVER MINING OPERATIONS

Name of Mine: Dynamic Leaching Plant La Herradura Mine

Name of Mine Owner: Fresnillo Plc

Name of Mine Operator: Minera Penmont S. de R.L. de C.V.

Name of Responsible Manager: Jose Arturo Arredondo Morales

Address: Minera Penmont S. de R.L. de C.V.
Callejon Sin Nombre 209 Oeste Entre Ave. N y P
Colonia Centro, C.P. 83600

State/Province: H. Caborca, Sonora

Country: Mexico

Telephone: +52 637 373-2204

Fax: +52 637 372-2044

E-Mail: arturo_arredondo@fresnilloplc.com

May 14, 2019
Date


Signature of Lead Auditor

La Herradura Dynamic Leaching Plant
Name of Facility

2.0 LOCATION DETAIL AND DESCRIPTION OF OPERATION

2.1 Mine Location

The La Herradura Mine (La Herradura) is in the Altar Desert approximately 80 kilometres (km) northwest of the city of Caborca and 20 km from the coast of the Gulf of California in the state of Sonora, Mexico (Figures 1 and 2). The nearest village (Ejido Juan Alvarez) is located approximately 5 km to the northeast of La Herradura. The Altar Desert is extremely arid and there is no surface water.

2.2 Background

The mine owner is Fresnillo plc (Fresnillo) and the mine operator is Minera Penmont S. de R.L. de C.V. (Penmont). Exploration at La Herradura dates to 1987. La Herradura operates an open pit and underground gold mine with two separate processing operations:

- Heap Leach Facility (HLF) with a Merrill Crowe Plant (MCP-HLF), pregnant pond, contingency ponds, and associated piping. These facilities began construction in 1997 and operation in 1998.
- Dynamic Leaching Plant (DLP) with a separate Merrill Crowe Plant (MCP-DLP) and a Tailings Storage Facility (TSF). These facilities began construction in 2014 and one train of the DLP began operation in 2015 while the second train began operation in 2018.

Note that this report uses the term DLP to refer to the entire operation collectively (i.e., DLP trains, MCP-DLP, and TSF). When one or both trains of the DLP are specifically meant, they are identified as such.

There is no physical connection between the HLF operation and the DLP operation. Therefore, Penmont decided to certify the DLP operation separately from the HLF operation. The HLF operation has been certified since 2008, but this is the initial certification for the DLP. Figure 3 shows an aerial photograph of the DLP operation from approximately 2014 when the first train was under construction.

La Herradura receives solid cyanide via isotankers from the Chemours Company Mexicana (Chemours). The isotankers are offloaded in a cyanide preparation area consisting of a dilution tank, a storage tank, and a dosification tank before the cyanide is distributed to the DLP. Offloading is completed by solid-liquid sparging with closed connections between the isotanker and the dilution tank.

The DLP consists of two trains of crushing, grinding, leaching serviced by the MCP-DLP and the TSF. In each train, ore is delivered to a crusher for crushing followed by grinding in a semi-autonomous grinding (SAG) mill and further grinding in a ball mill. In the second train only, high grade ore from the ball mill is sent to an intensive leaching circuit (ILR). Other ore is sent to a thickener, the agitation circuit, and the countercurrent washing (LCC, by its acronym in Spanish). Reagents, including cyanide, and oxygen are added in the agitation circuit. After the LCC circuit, underflow (tailings) is pumped to the geomembrane-lined TSF and, the pregnant solution reports to the MCP-DLP. The MCP-DLP was constructed with two process ponds, but they have been disconnected and flow goes directly from the LCC circuit to the MCP-DLP without intermediate storage. Reclaim water from the TSF is returned to the agitation circuit.

In the MCP-DLP, the pregnant solution first passes through a sedimentation tank (Hooper) followed by further removal of solids in clarifiers. After clarification, the pregnant solution is subject to a vacuum in the deoxygenation circuit to eliminate dissolved oxygen. Reagents are added to precipitate gold and silver which are filtered out in

filter presses. The resulting sludge is sent to the onsite refinery for smelting in the induction ovens to produce doré. The barren solution is returned to the agitation circuit.



Figure 1: Regional Location Plan



Figure 2: Local Location Plan



Figure 3: Aerial Photograph (Approximately 2014, Supplied by La Herradura)

PRINCIPLE 1 – PRODUCTION

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

Standard of Practice 1.1: Purchase cyanide from manufacturers employing appropriate practices and procedures to limit exposure of their workforce to cyanide, and to prevent releases of cyanide to the environment

in full compliance with

The operation is

in substantial compliance with

Standard of Practice 1.1

not in compliance with

Summarize the basis for this finding:

La Herradura has purchased cyanide only from Chemours who manufactures it at their plant in Memphis, Tennessee. The purchases are made under an agreement between Chemours and Minera Penmont S. de R.L. de C.V., the operator of La Herradura. La Herradura has purchased cyanide under supply agreements with Chemours since 2014, most recently under a supply agreement for the term 2017-2021. The cyanide contract covers both the HLF and DLP operations, but the DLP did not receive cyanide until the start of operations in 2015. The supply agreement contains language requiring that the cyanide be produced at a facility that has been certified as complying with the Code.

Chemours' production facility and its associated packaging facility are Code certified. Their most recent recertification was obtained in September 2016. As part of the Chemours Mexican Supply Chain, Chemours temporarily stores solid cyanide and transloads solid cyanide into isotankers at a warehouse in Hermosillo, Sonora. This warehouse is also certified under the production requirements of the Code. Its most recent recertification was obtained on September 11, 2017.

No independent distributors have been part of the cyanide supply chain.

The auditors reviewed supply agreements, a letter from Chemours on the cyanide supply chain, bills of lading, and invoices to verify compliance.

May 14, 2019
Date



Signature of Lead Auditor

La Herradura Dynamic Leaching Plant
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PRINCIPLE 2 – TRANSPORTATION

Protect Communities and the Environment during Cyanide Transport

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

in full compliance with

The operation is

in substantial compliance with

Standard of Practice 2.1

not in compliance with

Summarize the basis for this finding:

La Herradura purchases cyanide from Chemours who manufactures it at their plant in Memphis, Tennessee. The purchases are made under an agreement between Chemours and Minera Penmont S. de R.L. de C.V., the operator of La Herradura. According to Clause 13 of the supply agreement, Chemours transportation personnel, distributors, and contract carriers must comply with Code requirements. La Herradura is in full compliance because the entire Chemours supply chain from their plant in Tennessee, through Mexico, and to the mine has been certified. Colorant is added to the solid cyanide by Chemours upon loading solid cyanide into isotankers at the Hermosillo warehouse. The auditors reviewed the supply agreements and supply chain audit reports on the ICMI website to confirm compliance.

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

in full compliance with

The operation is

in substantial compliance with

Standard of Practice 2.2

not in compliance with

Summarize the basis for this finding:

La Herradura purchases cyanide from Chemours, who manufactures it at their plant in Memphis, Tennessee. The purchases are made under an agreement between Chemours and Minera Penmont S. de R.L. de C.V., the operator of La Herradura. Clause 13 of the contract states that Chemours transportation personnel, distributors, and contract carriers must comply with Code requirements. The entire Chemours supply chain from their manufacturing plant in Tennessee, through Mexico, and to the mine has been certified. The auditors reviewed the various supply chain audit reports on the ICMI website to confirm compliance. The auditors also reviewed purchase invoices, bills of lading, and a letter from Chemours on the cyanide supply chain to verify elements of the supply chain.

PRINCIPLE 3 – HANDLING AND STORAGE

Protect Workers and the Environment during Cyanide Handling and Storage

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

in full compliance with

The operation is

in substantial compliance with

Standard of Practice 3.1

not in compliance with

Summarize the basis for this finding:

La Herradura has designed and constructed the facilities for unloading, storing and mixing cyanide in accordance with cyanide producers' guidelines and sound and accepted engineering practices. La Herradura receives solid cyanide in isotankers into dilution, storage, and dosification tanks. La Herradura provided design drawings, a construction quality assurance report, and a letter from Chemours in support of the suitability of the facilities for use.

La Herradura has located the isotanker offload and tanks away from people and surface waters. There are no offices or areas where workers congregate nearby, and the closest community is 5 km away. Surface water does not exist because of the extreme aridity of the Sonoran Desert.

La Herradura has designed and constructed the isotanker offloading ramp to prevent seepage to the subsurface and to contain, recover and allow remediation of leakage. The isotanker is parked on a concrete ramp with a grated-concrete channel and a concrete hump at one end to contain leakage. The grated-concrete channel is connected to a sump with an automatic pump to recover leakage. La Herradura has installed the dilution, storage, and dosification tanks on solid reinforced concrete bases that can prevent seepage to the subsurface. The concrete secondary containment for the ramp and tanks also provides a competent barrier to leakage. The auditors observed these components to be in good condition.

La Herradura has installed level sensors on the three tanks with high-strength cyanide to prevent overfilling. The level sensors are connected to visual and audible alarms and the control room and have interlocks to start and stop the transfer pumps. The auditors reviewed sensor maintenance records and observed level readings in the control room to verify compliance.

La Herradura has stored high-strength cyanide outside with adequate ventilation to prevent the build-up of hydrogen cyanide gas (HCN); in a fenced and restricted area with locked valves to prevent inadvertent access; and with no other chemicals, foods, feeds, or tobacco products in the offload and tank area to prevent incompatibility issues. No isotankers are stored at site, thereby eliminating the potential for contact of solid cyanide with water.

May 14, 2019
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La Herradura Dynamic Leaching Plant
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Standard of Practice 3.2: Operate unloading storage and mixing facilities using inspections, preventative maintenance and contingency plans to prevent or contain releases and control and respond to worker exposures.

in full compliance with

The operation is

in substantial compliance with

Standard of Practice 3.2

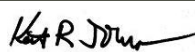
not in compliance with

Summarize the basis for this finding:

La Herradura receives solid cyanide in isotankers and does not manage any empty containers. However, the offload procedure requires that the isotanker valves be washed at the end of the offload and the isotanker checked to ensure it is depressurized.

La Herradura has developed procedures to prevent exposures and releases during isotanker offloading. The procedure for cyanide preparation contains detailed steps for operating the valves, couplings, and pumps and is accompanied by a checklist. The procedures for spills of solid cyanide or cyanide solutions require timely cleanup of cyanide spills during offloading. The procedure for cyanide preparation requires the use of personal protective equipment (PPE) consisting of face shield over safety glasses, hard hat, respirator, Tyvek suit, steel-toe rubber boots, rubber gloves, radio, and portable HCN monitor. The isotanker offloads are observed by a second operator from inside an adjacent observation room. Chemours adds red dye to the isotanker at the time that briquettes are loaded into the isotanker. Isotankers are not stacked or handled, unlike other cyanide containers. The auditors reviewed examples of the completed checklist and observed an offload during the site visit to verify compliance.

May 14, 2019
Date



Signature of Lead Auditor

La Herradura Dynamic Leaching Plant
Name of Facility

PRINCIPLE 4 – OPERATIONS

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

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

in full compliance with

The operation is

in substantial compliance with

Standard of Practice 4.1

not in compliance with

Summarize the basis for this finding:

La Herradura has developed written management and operation plans or procedures for the DLP cyanide facilities. The cyanide facilities with solutions containing 0.5 milligrams per liter (mg/l) or greater of Weak Acid Dissociable (WAD) cyanide are, including the cyanide preparation area; two SAG mill and ball mills; two trains with circuits for thickening, agitation, and LCC; one ILR; a contingency pond; the MCP-DLP consisting of a sedimentation vessel (Hooper), clarification, deoxygenation tower, filter presses, zinc cone, and a barren solution tank; process water and reclaim water tanks; a re-pulping tank adjacent to the TSF; the TSF; and pipelines, pumps, valves and appurtenances associated with the above facilities. The crushers for each DLP train are not cyanide facilities as no process solution is used therein. The MCP-DLP was originally constructed with two process ponds, but they have been disconnected and flow goes directly from the LCC circuit to the MCP-DLP without intermediate storage. The two process ponds are not cyanide facilities.

The high-level management systems relevant to cyanide management consist of International Standards Organization (ISO) 14001 Environmental Management; Occupational Health and Safety Management System (OHSAS) 18001 Safety Management; Mexican Industria Limpia program administered by the Mexican regulatory authority, Procuraduría Federal de Protection al Ambient (PROFEPA); and a corporate program for Health, Safety, Environment and Community Relations System (SSMARC by its acronym in Spanish).

La Herradura has developed plans and standard operating procedures (SOPs) that identify the assumptions and parameters on which the facility design was based, as well as regulatory requirements, to prevent and control cyanide releases and exposures. The key assumptions and parameters are: minimum pH of 10.3 for limiting HCN gas during offloading and minimum pH range of 10.5 for other circuits; free cyanide concentrations ranging from approximately 130 to 350 mg/l in the process circuits with the exception of the ILR where the concentration is 15 to 20 percent; WAD cyanide concentration less than 50 mg/l in the TSF; and a minimum freeboard of 2 meters (m) for the TSF.

La Herradura has developed procedures describing the standard of practice necessary for the safe and environmentally sound operation of the cyanide facilities, including the specific measures needed for compliance with the Code and regulatory requirements. La Herradura has developed a complete set of SOPs related to cyanide activities. La Herradura has also implemented inspections and uses a software program to manage maintenance.

La Herradura has developed a procedure to identify and evaluate changes in processes or operations that may increase the potential for the release of cyanide and incorporation of any release prevention measures that may be necessary. Changes are evaluated via a risk assessment matrix for health, safety, and environmental impacts. The auditors reviewed five forms for cyanide-related changes from 2018 that were signed by the Health, Safety, and Environmental Manager.

La Herradura has developed contingency procedures for deviations and upset scenarios, as well as for temporary closure or cessation of operation. The TSF Operation, Maintenance, and Surveillance Manual contains contingency actions for pump failure, power outage, valve failure, human error, and external events such as earthquakes and extreme storms. The procedure for the DLP contingency pond describes the steps to be taken in case of overtopping. The procedure for stopping and starting the MCP-DLP includes measures in case of power outage, equipment failure, column failure, pipe rupture, pump failure, and temporary stoppage. The procedures for grinding, milling, thickening, agitation, LCC, and ILR have sections on contingency actions in case of power failure and equipment failure. Finally, the procedure for temporary stoppage of the DLP and the MCP-DLP addresses temporary closure and cessation of operations.

La Herradura has inspected the cyanide facilities on an established frequency sufficient to assure and document that they are functioning within design parameters. La Herradura has conducted daily inspections at the DLP, MCP-DLP, TSF, and associated infrastructure, as well as monthly leadership and safety/hygiene inspections. La Herradura provided (1) ultrasonic testing results for tanks and vessels at the DLP (both trains) and the MCP-DLP; (2) forms for tank infrastructure that included daily inspection of secondary containments for the presence of fluids and available capacity; (3) forms for pipelines, pumps, and valves included daily inspection for deterioration and leakage; and (4) forms for the TSF that included daily measurements of the water surface elevations. The DLP, MCP-DLP, and the TSF do not have leak detection systems. The DLP, MCP-DLP, and TSF do not have surface water diversions that would require inspections. La Herradura has documented inspections on forms that include the date of inspections, the name of the inspector, and the deficiencies observed. The auditors reviewed forms detailing the nature of the deficiencies and the corrective actions completed.

La Herradura has implemented a maintenance program using a software program to ensure that equipment and devices function as required for safe cyanide management. The software schedules preventive preventative, unprogrammed, corrective, and basic maintenance. The auditors reviewed maintenance histories for randomly selected cyanide equipment from the DLP, MCP-DLP, and TSF to verify compliance, as well as maintenance histories for the fixed cyanide monitors, pH monitors, and selected tank level sensors.

La Herradura has installed and maintained backup generators to run the agitation and LCC circuits in both trains at the DLP to prevent unintentional releases and exposures if the primary power source is interrupted. La Herradura staff stated that the MCP-DLP and the TSF are not equipped with backup generators because all fluid movement would stop in a power outage.

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

in full compliance with

The operation is

in substantial compliance with

Standard of Practice 4.2

not in compliance with

Summarize the basis for this finding:

La Herradura conducted an initial program to determine appropriate cyanide addition rates in the mill and has evaluated changes in the addition rates on an as-needed basis when ore types change. The initial program of bottle roll tests in 2011 resulted in an addition rate of 250 grams/ton of cyanide and a target concentration of 300 mg/l free cyanide in the agitation circuit. Testing in late 2018 evaluated the addition rate for the sulfide portion of the ore body.

La Herradura has evaluated and implemented manual and automatic control strategies for cyanide addition. The manual strategy consists of sampling every four hours at the thickener, the seven agitation reactors, and LCCs 1 and 5, followed by analysis in the onsite laboratory. The automatic strategy consists of a CyanoProbe sampler that controls a variable speed drive for the cyanide addition pump.

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

in full compliance with

The operation is

in substantial compliance with

Standard of Practice 4.3

not in compliance with

Summarize the basis for this finding:

La Herradura has implemented a comprehensive water management program to prevent releases from the TSF. The operational water balance is comprehensive in that it includes application rates, precipitation, evaporation, and run-on, as appropriate for the design and setting. It is probabilistic in that model includes scenarios extreme events and a wet year. The model has evaluated three scenarios (i.e., the 100-year 24-hour design storm, the design storm during a wet year, and the probable maximum precipitation. Precipitation data from a government weather station were calibrated to the site using site data. Evaporation data were estimated based onsite weather data. Run-on from the stockpiles to the north of the TSF was included in the model. Losses include pumping of reclaim water and evaporation. In the event of a power outage, tailings inflow and reclaim water inflow immediately stop. Other factors such as freezing/thawing, discharge of treated water, seepage losses, and interaction of the TSF with the deep groundwater are inapplicable to this geomembrane-lined TSF in an extremely arid climate.

La Herradura has implemented the water balance with operating procedures to prevent overtopping of the TSF and unplanned discharge of cyanide solutions to the environment. The water balance is updated monthly based on current precipitation and evaporation data, as well as monthly drone surveys. Water surface elevations from five staff gages are recorded daily.

La Herradura has designed and operated the TSF with adequate freeboard above the storage capacity. Mexican regulations require 1 m minimum freeboard, but La Herradura has adopted a minimum freeboard of 2 m. The monthly model updates use current data and rerun the 100-year 24-hour storm scenario to verify that the minimum freeboard is continually available.

La Herradura measures precipitation at the site weather station and their nearby Noche Buena Mine. Precipitation data were most recently compared to design assumptions in 2017, which resulted in a higher value for the

100-year 24-hour storm than had previously been used. Therefore, La Herradura has measured precipitation and revised operating practices as necessary.

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

in full compliance with

The operation is in substantial compliance with **Standard of Practice 4.4**
 not in compliance with

Summarize the basis for this finding:

La Herradura has implemented measures to protect birds, wildlife, and livestock from cyanide solutions. The only cyanide facility at the DLP with open water is the TSF. La Herradura has installed a barbed wire fence along the property line near the TSF to restrict access by wildlife and livestock. La Herradura provided internal and external analytical data showing the TSF consistently had concentrations of WAD cyanide less than 50 mg/l in the 3 to 6 months preceding the site visit. The external samples were collected monthly from spigotted tailings, while the internal samples were collected every 2 or 3 days from the decant pool. Based on daily inspections of the TSF, no wildlife mortalities occurred during the 3 months preceding the site visit. The DLP is not associated with the HLF and therefore the issue of overspray and ponding is inapplicable.

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

in full compliance with

The operation is in substantial compliance with **Standard of Practice 4.5**
 not in compliance with

Summarize the basis for this finding:

This question is inapplicable because the DLP does not have a direct discharge nor is any surface water present due to the extreme aridity at the site.

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

in full compliance with

The operation is in substantial compliance with **Standard of Practice 4.6**
 not in compliance with

Summarize the basis for this finding:

La Herradura has implemented specific water management measures to protect the beneficial use of groundwater beneath and immediately down-gradient of the operation. Plant areas, pump stations, and pipelines have impermeable secondary containments and the TSF was geomembrane lined.

The applicable groundwater standard promulgated by the Mexican authority PROFEPA is 0.02 mg/l total cyanide for irrigation use. There is no designated point of compliance, but La Herradura samples two groundwater monitoring wells downgradient of the TSF, DLP, and MCP-DLP every 6 months. The concentrations of the applicable species (i.e., total cyanide) were below regulatory standards for the designated beneficial use of irrigation in the year preceding the site visit.

Tailings are not used as underground mine backfill.

Because cyanide concentrations in groundwater have not exceeded the applicable standards, La Herradura is not engaged in remediation.

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

in full compliance with

The operation is

in substantial compliance with

Standard of Practice 4.7

not in compliance with

Summarize the basis for this finding:

La Herradura has provided secondary containments for tanks with high-strength cyanide and other tanks, columns, and vessels with process solutions. These containments are concrete and were observed to be in good condition. The tank bases for tanks containing cyanide have concrete underneath them. La Herradura has sized the secondary containments, either individually or through gravity-flow interconnections, to hold a volume significantly greater than 110 percent of the largest vessel within the containment and adequate to accommodate a large storm and spill.

La Herradura has prepared a procedure that describes the automatic (pumps) and passive (gravity-flow) operation of the sumps and containment interconnections to prevent a discharge to the environment. All liquids in the containments are considered process solutions and are not to be released to the environment.

Although the DLP does not have any tanks without secondary containment, La Herradura has nonetheless prepared procedures for cleanup of solid and liquid cyanide spills to soil.

LH has provided spill containment measures for cyanide process solution pipelines to collect leaks and prevent releases to the environment. High-strength cyanide pipelines have been installed over metal trays or over concrete. Process solution pipelines have been installed over concrete or pipe-in-pipe. Tailings and reclaim water pipelines have been installed in concrete channels. An exception is an elevated reclaim water pipeline at the DLP Train 2 that is over earthen fill. Given that groundwater is approximately 100 m deep, the climate is extremely arid, and the WAD cyanide concentration in the reclaim water is low, La Herradura has adopted an approach of detailed inspections twice daily. Because of the extreme aridity at the site, there are no special risks posed to surface water by pipelines.

La Herradura has constructed tanks, columns, vessels, and pipelines of steel and HDPE, which are materials that are compatible with cyanide and high pH conditions.

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.

in full compliance with

The operation is

in substantial compliance with

Standard of Practice 4.8

not in compliance with

Summarize the basis for this finding:

Golder was not involved in most of the documents for the construction of the DLP. However, Golder was involved in the construction oversight for phase 1 of the TSF. Therefore, Golder subcontracted to an independent reviewer to review that document.

Golder Review

La Herradura has implemented QA/QC programs for both trains of the DLP and the MCP-DLP. The many QA/QC reports reviewed by the auditors covered materials suitability, earthworks placement and compaction, laboratory testing, as well as visual inspection, liquid penetration, and ultrasonic testing for tanks and pipelines. Evidence of review by qualified engineers and managers was provided by turnover letters at the end of construction that were signed by the La Herradura project manager, sub-director of engineering and construction, and the project owner. These turnover letters stated that “the owner has reviewed the works and found them constructed according to the instructions, specifications, and plans for the project”.

La Herradura also implemented a QA/QC program for Phase 2 of the TSF. The Quality Assurance Report for Phase 2 of the TSF covered materials suitability, earthworks placement and compaction, laboratory testing and liner installation, as well as as-built drawings. This report also stated that staff from the responsible engineering consultant observed the construction and testing, and confirmed the construction was completed according to the plans and specifications. The report was signed by the consultant’s directing engineer, QA/QC engineer, and QA/QC supervisor as evidence of qualified review. The analogous report for the completion of Phase 3 of the TSF was unavailable at the time this Detailed Audit Report was prepared.

Independent Review for the TSF Phase 1

The construction of Phase 1 was completed under the governance of a Construction Quality Assurance (CQA) program designed to assure the quality of construction was in compliance with the intent of the design. The CQA was completed under the supervision of qualified personnel and the results are documented in a report that is maintained at the site. The report contains the appropriate records signifying the CQA was completed according to design.

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

in full compliance with

The operation is

in substantial compliance with

Standard of Practice 4.9

not in compliance with

Summarize the basis for this finding:

La Herradura or their contracted laboratory have developed written standard procedures for wildlife, tailings, and groundwater monitoring activities. Sampling and analytical protocols have been developed by appropriately qualified personnel. The Mexican agency for laboratory certification (Entidad Mexicana de Acreditación [EMA]) has certified the contracted laboratory for analysis of free, WAD, and total cyanide species. The laboratory's field samplers are listed in the EMA certification for 2017-2018.

The sampling procedure prescribes the equipment, methods, containerization, preservation, and shipping instructions. Blank chain-of-custody and field forms are also included. Sampling locations are shown on a separate figure. The field forms document the containers, preservatives, sampling equipment, calibration of field instruments, field parameters during purging, wellhead conditions, weather conditions, constituents, and other conditions that may affect sample integrity.

La Herradura has monitored groundwater for total cyanide (as required by government regulations) in two monitoring wells downgradient of the TSF, DLP, and MCP-DLP.

La Herradura has inspected the DLP, MCP-DLP, and TSF for bird and wildlife mortalities related to cyanide using an inspection form.

La Herradura has conducted monitoring at frequencies adequate to characterize the medium being monitored and to identify changes in a timely manner. Groundwater is monitored every 6 months, which is an appropriate frequency for the deep groundwater at the site. Tailings at the spigots are monitored monthly and the decant pool is monitored every two to three days. Wildlife mortalities at the TSF are monitored daily.

Surface water monitoring is inapplicable because of the extreme aridity at the site.

May 14, 2019
Date


Signature of Lead Auditor

La Herradura Dynamic Leaching Plant
Name of Facility

PRINCIPLE 5 – DECOMMISSIONING

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

Standard of Practice 5.1: Plan and implement procedures for effective decommissioning of cyanide facilities to protect human health, wildlife and livestock.

in full compliance with

The operation is

in substantial compliance with

Standard of Practice 5.1

not in compliance with

Summarize the basis for this finding:

La Herradura has developed written procedures related to the decommissioning of cyanide facilities. These procedures are included in Appendix D of the La Herradura Conceptual Closure Plan. The plan includes the DLP, MCP-DLP, and the TSF, as well as activities related to disposition of residual chemicals, and decontamination. Appendix C of the plan presents a general schedule for closure, including decommissioning activities.

The La Herradura Conceptual Closure Plan was updated in 2014 and 2016 and amended in 2018. The auditors reviewed Section 10.5 of the plan and the 2018 amendment to confirm that the plan had been updated to incorporate the operational changes made during this timeframe.

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

in full compliance with

The operation is

in substantial compliance with

Standard of Practice 5.2

not in compliance with

Summarize the basis for this finding:

The Conceptual Closure Plan (updated in 2016 and amended by a Technical Memorandum in 2018) includes an estimate of the costs to fully fund third-party implementation of all closure activities at La Herradura. Although the DLP is undergoing initial certification, the self-guarantee covers the DLP and the separately certified HLF at La Herradura. The closure costs cover the cyanide-related decommissioning measures. The estimated costs have been updated to consider closure costs associated with the site expansion. La Herradura provided a 2018 letter from an external financial auditor, to verify a self-guarantee mechanism to cover the estimated costs for cyanide-related decommissioning activities. The letter includes the financial auditor’s certification number and results from the financial test. The self-guarantee amount for closure is greater than the estimated costs for decommissioning the cyanide facilities.

PRINCIPLE 6 – WORKER SAFETY

Protect Workers’ Health and Safety from Exposure to Cyanide

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

in full compliance with

The operation is

in substantial compliance with

Standard of Practice 6.1

not in compliance with

Summarize the basis for this finding:

La Herradura has developed SOPs for the cyanide-related activities at the DLP, MCP-DLP, and TSF. The procedures cover cyanide unloading, storage and preparation, plant and leach pad operations, confined spaces, decontamination, and other cyanide-related activities. Each procedure covers the work objective, scope, responsible persons, definitions, risks and hazards, environmental issues, the necessary tools and equipment, PPE, safety equipment, procedural steps, and emergency procedures where relevant. Areas where cyanide is used also have signs listing the PPE requirements. La Herradura completes pre-work inspections using checklists for offloading and mixing of cyanide isotankers.

La Herradura has implemented a procedure and created forms to be used when an operational or process change/modification is proposed. The procedure considers the involvement of process, environmental and safety personnel in the assessment of the proposed changes. The forms describe the change and the controls and must be signed by the initiator of the requested change and the environmental/safety manager. The auditors reviewed completed change management forms including examples of changes to cyanide facilities to verify that La Herradura is implementing the written procedure.

La Herradura provides opportunities for supervisors and workers to provide input to develop, evaluate, and improve health and safety procedures. Procedures are reviewed at least every two years and potential improvements, or modifications are discussed at meetings including daily, weekly, and monthly meetings and health and safety talks. Where procedures have been revised or modified, the nature of the changes are reviewed and discussed with workers in these meetings as well. On an ongoing and rotating basis, workers are assigned SOPs to review and present to the group during safety meetings. The auditors reviewed example records of these events to verify compliance.

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

in full compliance with

The operation is

in substantial compliance with

Standard of Practice 6.2

not in compliance with

Summarize the basis for this finding:

La Herradura has established target pH levels to prevent the formation of HCN and has implemented methods to monitor and ensure that pH is higher than the target levels throughout the process. The minimum pH is 10.3 for

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offloading and 10.5 for other solutions. The auditors reviewed documentation provided by the cyanide supplier, Chemours, and the results of pH monitoring by operators during offload events to determine that the target pH levels were being met. The auditor also reviewed records of pH monitoring points throughout the process to verify that target pH levels are achieved.

La Herradura has installed fixed HCN monitors in areas of potential exposure to cyanide. In addition, operators use portable HCN meters when working in high exposure areas or on tasks involving full-strength solutions, to conduct maintenance work, confined space related work and other cyanide tasks. HCN sensor alarms are set at 4.7 parts per million (ppm) (notification alert followed by operator response to determine the appropriate actions) and 10 ppm (evacuation alarm). Both portable and fixed HCN monitors are maintained, calibrated, and inspected as recommended by the manufacturer, as verified by calibration and maintenance records.

The auditors observed that warning signs are posted in areas where cyanide is used to alert workers that cyanide is present, that smoking, eating, and drinking are not allowed, and that the necessary cyanide-specific PPE must be worn. Pipes carrying cyanide are marked and the direction of flow is indicated with arrows on the pipe. Tanks containing cyanide solutions are clearly marked. Signage warning of confined spaces in tanks has also been placed.

Chemours adds red dye at the time of transloading from containers to isotankers at their warehouse in Hermosillo, Sonora. La Herradura has therefore adopted the practice of dyeing the cyanide solution for ease of identification.

Showers, low-pressure eye wash stations and dry powder fire extinguishers are located at strategic locations throughout the operation and are maintained, inspected and tested on a regular basis. The auditors randomly inspected showers and eyewash stations to verify they were operational. First aid procedures and Safety Data Sheets are available in the workplace and in the control room, as well as the Process, Environmental and Safety Departments. The instructions are in Spanish, the language of the workforce.

La Herradura has implemented procedures that require all incidents and accidents involving cyanide exposure be investigated and evaluated to determine if its programs and procedures to protect worker health and safety and to respond to cyanide exposures are adequate or if changes are necessary. As there were no reported cyanide-related incidents, the auditors verified compliance by reviewing incident reports for other types of incidents that are reported and investigated using the same procedures and tools.

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

in full compliance with

The operation is

in substantial compliance with

Standard of Practice 6.3

not in compliance with

Summarize the basis for this finding:

Cyanide antidote kits are located throughout the operations (at the clinic, the control room, the DLP, the MCP-DLP, and in the laboratories). Cyanide antidote kits include amyl nitrite, sodium nitrite, sodium thiosulfate, oxygen, and a first aid kit. In addition, automated external defibrillators and an ambulance are located in the medical clinic. Amyl nitrite is stored at the manufacturer’s recommended temperature and is within expiration dates. All operators

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carry a radio, and other means of communication (such as phones, satellite phones, and internet) are available in multiple locations. The auditors reviewed examples of inspection records to verify that first aid equipment was inspected regularly.

La Herradura has developed written emergency response SOPs and plans for cyanide exposures. These documents include procedures for emergency response equipment preparation, emergency response procedures, and cleanup of solid and liquid cyanide spills and residuals. The procedures and plans address response measures for cyanide exposures and releases, decontamination procedures, evacuation, emergency contact information, clean-up measures, reporting requirements and others.

La Herradura has its own on-site medical clinic staffed at all times with a physician and paramedics to provide first aid or medical assistance to workers exposed to cyanide. La Herradura has developed procedures to transport workers exposed to cyanide to a clinic located in Caborca for further treatment, if needed. The Santa Fe Clinic of Caborca has agreed in writing to maintain trained medical staff capable of treating patients for cyanide poisoning. La Herradura has determined that Santa Fe Clinic has qualified medical physicians to respond to cyanide exposures. The letter also stated that the hospital has medical and paramedic staff have been trained to provide care to patients with a diagnosis of cyanide poisoning. La Herradura arranged for the clinic to receive training from Chemours in cyanide exposure treatment, and while the clinic does not have antidote kits, the site doctor or paramedic accompanying a patient to the clinic would bring cyanide antidote kits with them.

La Herradura has conducted a mock drill of a cyanide release and exposure in the MCP-DLP, and a second mock drill of a release at the TSF. The auditors reviewed the drill reports to confirm that lessons learned were communicated and corrective actions completed to resolve deficiencies.

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PRINCIPLE 7 – EMERGENCY RESPONSE

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

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

in full compliance with

The operation is

in substantial compliance with

Standard of Practice 7.1

not in compliance with

Summarize the basis for this finding:

La Herradura has developed SOPs, an Emergency Response Plan, and an Accident Prevention Plan that together address the potential cyanide failure scenarios for the site-specific environmental and operating circumstances. The Emergency Response Plan addresses accidental releases of cyanide. Emergency response is described in the SOP “Preparation and Response to Emergencies” where they identify the potential emergency situations and the activities and components that must be prepared before the emergency. The plans and SOPs consider the following potential cyanide failure scenarios: catastrophic releases; transportation accidents; releases during mixing, unloading, fires, and explosions; pipe, tank, and valve ruptures; pond overtopping; power outages; and pump failures. The Operation, Maintenance, and Surveillance Manual for the TSF describes the response actions for that facility. Failure of cyanide treatment systems is not addressed because La Herradura does not have a destruct circuit. Segutal, Chemours’ transporter to the site, has responsibility for transportation accidents until actual delivery of cyanide to the dilution tank via isotankers, although La Herradura would assist in the event of a transportation accident.

The Emergency Response Plan, SOPs, and Accident Prevention Program describe the specific actions to be taken in case of emergency such as the use of cyanide antidotes and first aid measures, first responders, responsibilities, telephone contact lists, call for external help, site evacuation, and recovery after the emergency.

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

in full compliance with

The operation is

in substantial compliance with

Standard of Practice 7.2

not in compliance with

Summarize the basis for this finding:

La Herradura solicits the input of its workforce and local response agencies in the emergency response planning through safety meetings, training sessions, and mock drills. Workers input in developing and evaluating health and safety procedures is via direct communication between supervisors and operators and during daily five-minute meetings and monthly safety meetings. La Herradura has involved local response agencies in the cyanide emergency response planning through training sessions and mock drills.

The operation made potentially affected communities aware of the nature of the risks associated with accidental cyanide releases even though La Herradura provided evidence that these communities would not be affected by

cyanide releases. La Herradura has established communication channels with the communities located around the mine through community meetings and through their contractors and brigade members and workforce who live in Ejido Juan Alvarez, Sahuaro, and Caborca. Mine workers and contractors, many of them these three towns, have received cyanide-related training as part of the general training required by La Herradura.

The operation involves local response agencies in the cyanide emergency planning and response process. The Caborca Fire Department and Civil Protection authorities have participated in the mock drills in the past, and in a training event at the 2018 SSMARC Week event. Some of La Herradura brigade members are also members of the Caborca Fire Department. La Herradura has a letter from the Santa Fe Clinic of Caborca, dated 1 June 2018, which states they have the staff and resources to provide emergency aid for cyanide poisoning.

La Herradura solicited the input of various stakeholders in emergency response mock drills conducted at the MCP-DLP and at the TSF in 2018. Debriefs were conducted to discuss lessons learned and the necessary corrective actions were incorporated into the Emergency Response Plan. Contact and agency information in the Contingency Plan is updated regularly.

Fresnillo, the parent company of La Herradura, sits on the Technical Advisory Committee for Hazardous Materials in Sonora. Records of these meetings show that other committee members include other area industries, Chemours, and first response agencies including fire, civil emergency, police and medical responders. This group meets monthly, and discusses area emergency response preparedness and response issues, including cyanide related emergencies.

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

in full compliance with

The operation is

in substantial compliance with

Standard of Practice 7.3

not in compliance with

Summarize the basis for this finding:

La Herradura designates the personnel and the necessary equipment and resources for emergency response. The Accident Prevention Program, its appendices and the SOP “Emergency Response Procedure” identify the brigade members, required training for the emergency responders, include 24-hour contact information for the coordinators and response team members, specify their duties and responsibilities, list the emergency response equipment, include requirements for inspection of emergency response equipment, and describe the role of outside responders. The auditors reviewed the brigade member list with information on its team members, including their complete name, home address, telephone number, and working area. La Herradura maintains a copy of this list in the Safety Department and with the mine dispatcher.

Through the participation of outside entities in meetings, training sessions, and mock drills, La Herradura has confirmed that these entities are aware of their involvement. La Herradura has performed mock drills with the participation of the Caborca Fire Department, Civil Protection authorities, and in coordination with Caborca medical center. La Herradura doctors communicate with the medical staff of the Santa Fe Clinic of Caborca. La Herradura has trained the clinic staff and other area emergency personnel in “Hazardous Materials Emergencies and Sodium Cyanide” during the SSMARC Week in 2018. Fresnillo, the parent company of La Herradura, sits on

the Technical Advisory Committee for Hazardous Materials in Sonora. together with other area industries, Chemours, and first response agencies including fire, civil emergency, police and medical responders. This group meets monthly, and discusses area emergency response preparedness and response issues, including cyanide related emergencies.

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

in full compliance with

The operation is

in substantial compliance with

Standard of Practice 7.4

not in compliance with

Summarize the basis for this finding:

The SOP “Emergency Response Procedure” includes a section regarding the internal and external notifications to be made in case of an emergency, followed by a contact list with 24-hour response telephone and radio numbers for emergencies. The list includes the names of internal first responders, security, medical services, regulatory agencies, and the brigade. For external aid, the list contains contact information of the Caborca Fire Department, the Santa Fe Clinic, police and emergency center at Caborca. The auditor also observed this information available in the MCP-DLP, in the Safety Department, and the brigade coordinator’s office. This SOP also states that the command center for an emergency would be in charge of internal and external communications. The La Herradura public relations manager, who would be involved with any emergency, has contact information of the members of the local communities and the media.

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

in full compliance with

The operation is

in substantial compliance with

Standard of Practice 7.5

not in compliance with

Summarize the basis for this finding:

La Herradura has prepared response and remediation plans for potential cyanide releases. SOPs “Cleanup of Solid Cyanide Spills” and “Attention to Spills of Cyanide Solutions” describe procedures to recover solid cyanide spills and cyanide solutions, as well as to neutralize contaminated soils with hypochlorite solution. The procedures describe how the chemical solution is to be prepared to the appropriate concentration, and what final cyanide concentration will be allowed in soil as evidence after cleanup. Contaminated soil will be disposed at the TSF. La Herradura uses bottled drinking water because well water is brackish.

Environmental staff stated there is no surface water at La Herradura and that the groundwater table is 100 m deep. Therefore, any use La Herradura may make of chemicals (including sodium hypochlorite, ferrous sulfate, or hydrogen peroxide) is at no risk of release into surface waters.

La Herradura has developed plans to sample soils and monitor groundwater in the event of spills. The SOPs “Attention to Spills of Cyanide Solutions” and “Cleanup of Solid Cyanide Spills” require that contaminated groundwater and/or soils are monitored after a cyanide spill.

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

in full compliance with

The operation is

in substantial compliance with

Standard of Practice 7.6

not in compliance with

Summarize the basis for this finding:

La Herradura reviews and evaluates the cyanide-related elements of its emergency response procedures on a regular basis. The site has procedures to review emergency response procedures following simulated or actual cyanide-related emergencies. The auditors observed that La Herradura had reviewed emergency plans and procedures at least every two years or when it was necessary, for example after the mock drills exercises or changes in the process. Brigade member information contained within the Accident Prevention Program is reviewed and updated every year or whenever personnel changes occur in the brigade.

La Herradura conducted two cyanide-related mock drills in 2018, one at the MCP-DLP and one at the TSF. These drills were based on potential cyanide release/exposure scenarios and included communication with external emergency responders.

The auditors reviewed updates of the major components of the plans and procedures, such as the emergency equipment list and its location, the names of the brigade members, and the emergency contact list. No cyanide-related emergencies had occurred in the period prior to the initial audit, so plan updates were identified through the course of routine reviews. La Herradura has procedures in place to conduct reviews following simulated and actual cyanide-related emergencies, and revise procedures as may be needed.

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PRINCIPLE 8 – TRAINING

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

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

in full compliance with

The operation is

in substantial compliance with

Standard of Practice 8.1

not in compliance with

Summarize the basis for this finding:

La Herradura provides cyanide-related training to visitors, contractors, workers, and emergency brigade members. New employees, including contractors and visitors, are required to attend general cyanide awareness training before being able to work or visit the mine site. The general awareness training addresses the properties of sodium cyanide, as well as the health effects and symptoms of cyanide poisoning, and how to respond to exposure events. The auditors reviewed the hardcopy and electronic records of the general cyanide training and examples of its exam results for new hires, contractors, and visitors in 2018 to verify compliance.

La Herradura requires workers to complete refresher training annually. The refresher training repeats the general awareness training and is delivered along with refresher training in SOPs and emergency procedures. The auditors reviewed examples of training records and tracking spreadsheets for 2018 to verify compliance.

La Herradura retains the training records for workers, visitors, and contractors. The auditors reviewed examples of training records for 2018, as well as training matrices where La Herradura tracks the attendee name, working area, instructor name, date, and the grade they received.

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

in full compliance with

The operation is

in substantial compliance with

Standard of Practice 8.2

not in compliance with

Summarize the basis for this finding:

La Herradura provides task training to process staff working in the DLP operation so that they perform their duties with minimum risk for exposure and releases. The training involves both classroom materials and direct supervision while performing the tasks, and comprehension is verified by written exams and supervisor observation. Training elements necessary for each job involving cyanide management are identified in the training materials, which address all the relevant tasks and SOPs. Appropriately qualified personnel provide cyanide task training and include internal and external trainers. Task specific training to new operators is provided by process area supervisors with years of experience in work process related to cyanide. Onsite doctors/paramedics and emergency responders provide cyanide general awareness training covering hazard awareness, intoxication and emergency response. Chemours has provided additional cyanide-related training.

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La Herradura requires that all employees be trained before working with cyanide and the staff must be observed and approved by their supervisor before they are able to work independently. Before that time, new staff must be accompanied by more experienced staff. La Herradura evaluates the effectiveness of cyanide task training by written tests and direct supervisor observation. The auditors confirmed compliance by review of records and interviews.

La Herradura tracks the need for and completion of task training and annual refresher training with a series of spreadsheets that list the procedures applicable to each task and worker in the plants. Training records, both electronic and hardcopy, are retained throughout an individual’s employment. The hardcopy records include the names of the employee and the trainer; the date of training; the topics covered; and test results demonstrating an understanding of the training materials. Electronic records provide the history of training for each person. The auditors reviewed a selection of hardcopy and electronic training records from 2018 and interviewed staff to verify compliance.

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

in full compliance with

The operation is

in substantial compliance with

Standard of Practice 8.3

not in compliance with

Summarize the basis for this finding:

La Herradura cyanide responders, including personnel responsible for cyanide-related tasks and maintenance, are trained in decontamination and first aid procedures in case of a cyanide emergency. Task specific SOPs, including the “Emergency Response Procedure”, describe first aid, decontamination, and remediation procedures for cyanide-related exposures and releases. Site cyanide response personnel have taken part in mock drills to test and improve their response skills, and have on occasion, involved external emergency responders in these drills as well.

La Herradura has a brigade trained in emergency procedures regarding cyanide, including the use of response equipment. The auditor reviewed the training records for the brigade members to verify they are provided with the required knowledge and are trained to respond to different emergencies that may arise. The brigade undertakes practices and drills and receives training relevant to cyanide releases or emergencies including: hazardous materials (Hazmat); sodium cyanide; extinguishers, evacuation routes and emergency exits; protective equipment and fire fighting; compressed air breathing equipment (air pack); and, emergency command.

La Herradura has coordinated the emergency procedures with local responders: fire department, Red Cross, Civil Protection and the Santa Fe Clinic in Caborca and with community authorities in Ejido Juan Fernandez and Sahuaro.

La Herradura provides annual refresher training in the emergency response procedures for cyanide related emergencies response and procedures for cyanide spills to the environment and intoxication. La Herradura requires that all staff working at the cyanide facilities are responsible to respond to cyanide emergencies at least at a basic or first-responder level. All staff are required to receive training in cyanide-related emergency response procedures each year, including basic response measures for exposures and releases.

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La Herradura conducted two mock emergency drills during 2018, including worker exposure and environmental release scenarios. The auditors reviewed records of these drills and verified that the drills are assessed to identify opportunities for improvement in response procedures, brigade and worker training, communications, and other aspects of emergency response.

Training records are retained throughout an individual's employment documenting the training they receive, including all cyanide related training. The records include the names of the employee and the trainer, the date of training; the topics covered, and test results demonstrating an understanding of the training materials.

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PRINCIPLE 9 – DIALOGUE

Engage in Public Consultation and Disclosure

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

in full compliance with

The operation is

in substantial compliance with

Standard of Practice 9.1

not in compliance with

Summarize the basis for this finding:

La Herradura provides opportunities for stakeholders to communicate issues of concern through school, family, and community tours, as well as via the Fresnillo website and the local office in Caborca. Tours are conducted on a regular basis and reached an estimated 400 visitors annually. Tours provide informative cyanide materials and describe cyanide use. Visitors are encouraged to ask questions or raise concerns, and personnel from all aspects of the operations are made available to address concerns or provide additional information.

The Fresnillo website at <http://www.fresnilloplc.com/contacts/corporate-offices> also provides information on cyanide and the Code, as well as contact links for sustainability personnel through whom concerns, or inquiries related to La Herradura’s use of cyanide can be addressed.

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

in full compliance with

The operation is

in substantial compliance with

Standard of Practice 9.2

not in compliance with

Summarize the basis for this finding:

La Herradura creates opportunities to interact with stakeholder and to provide them with information regarding cyanide management, primarily consisting of school and family tours, and the Fresnillo website. In addition, La Herradura has worked with community agencies to participate in annual Water Day and Safety Week activities. La Herradura has worked with the Caborca Fire Department, Red Cross, Civil Protection, and clinic medical staff on the response to cyanide exposures. The auditors also reviewed a brochure that is provided to visitors on the uses of sodium cyanide in industry.

Fresnillo has an office in the local city of Caborca, which is used for community meetings and may be visited by stakeholders seeking more information about La Herradura and cyanide use. The Fresnillo website at <http://www.fresnilloplc.com/contacts/corporate-offices> also has contact information and information about the use of cyanide in company operations, including La Herradura.

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

in full compliance with

The operation is

in substantial compliance with

Standard of Practice 9.3

not in compliance with

Summarize the basis for this finding:

La Herradura provides operational and environmental information regarding cyanide to stakeholders in a variety of formats and venues. The auditors reviewed articles published in different magazines and newspapers of regional circulation that describe La Herradura’s mine activities, health and safety care and community relations. During the mine site tours, the public can see the video “La Herradura Mine” describing the mine activities including the process and use of cyanide. This information is also available at the community office in Caborca.

The Fresnillo website at <http://www.fresnilloplc.com/contacts/corporate-offices> also provides information about the Code and the use of cyanide at mine sites including La Herradura. Members of the public may pose questions or raise concerns to La Herradura directly in the course of the tours, during meetings, and via contact information provided on the website.

The operation disseminates information on cyanide in a variety of forms, including verbally in Spanish (the local language). The informational video that precedes family and school tours gives a verbal description of cyanide use in the process, as well as video images of the processes. In the course of the tours, verbal information is provided and dialogue with the visitors is encouraged. Community presentations by La Herradura personnel at Water Day, Safety Week, and SSMARC Week are made verbally. At the community office in Caborca, interactions with interested members of the public are generally verbal, with the support of published materials including illustrated brochures that rely on pictorial images as much as text to convey the information.

La Herradura has not had any on- or off-site cyanide spills, releases of cyanide, or incidents of exposure to cyanide requiring response or remediation. A La Herradura procedure for spill management states that details of a spill would be reported to PROFEPA within three days of the incident. In the event of an exposure incident, La Herradura would report details of the exposure to the Instituto Mexican del Seguro Social (IMSS) and Secretaria del Trabajo y Prevision Social (STPS). These federal agencies would make the information available to the public.

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Golder Associates Inc.



Kent R. Johnejack
Lead Auditor / Mining Technical Specialist



Evan Jones
Mining Technical Specialist

KJ/EJ/rt

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