GOLDER

REPORT

ICMC RECERTIFICATION SUMMARY AUDIT REPORT

Noche Buena Mine, Sonora, Mexico

Submitted to:

International Cyanide Management Institute (ICMI)
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Washington, DC 20005
United States of America

Submitted by:

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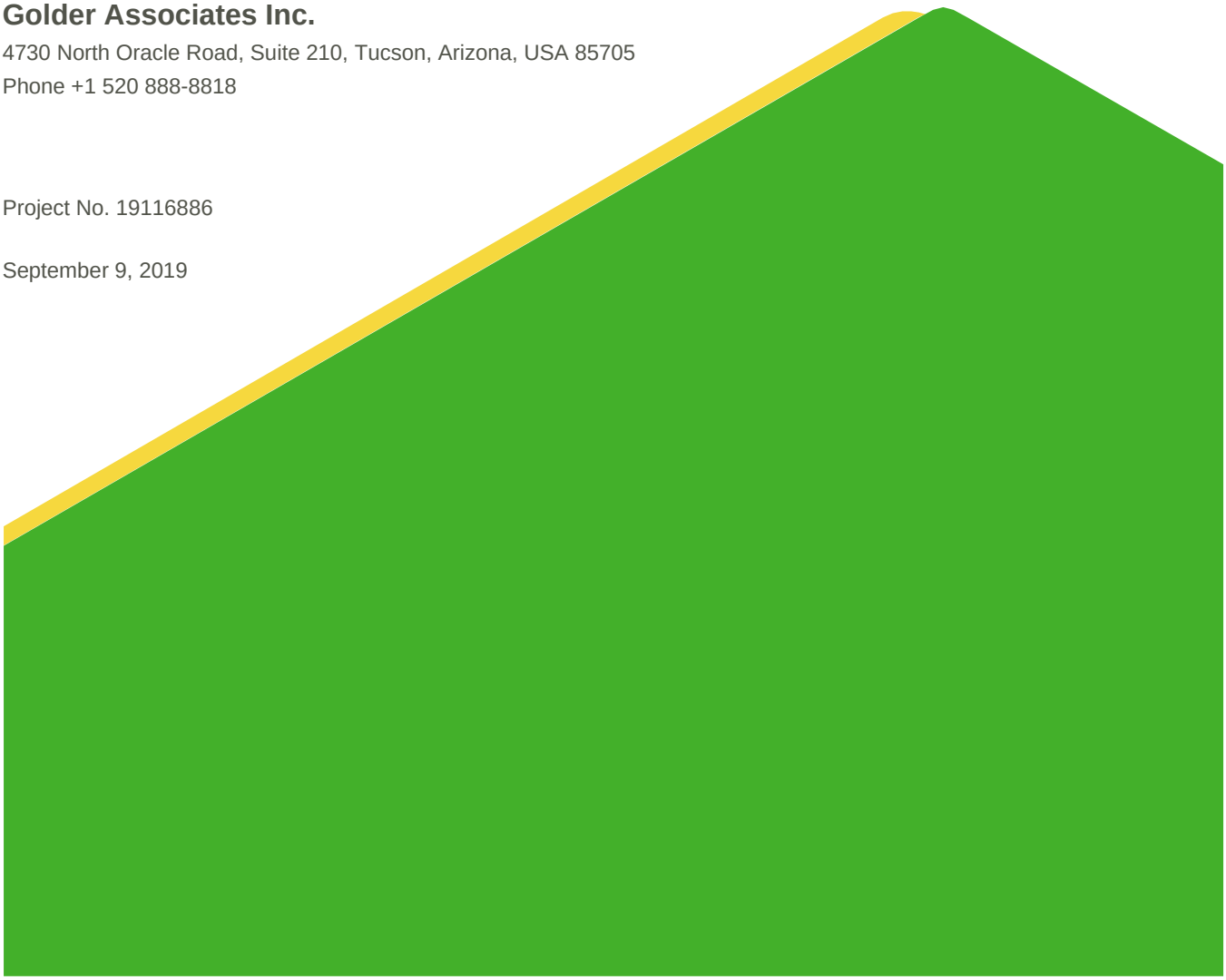

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1.0 SUMMARY AUDIT REPORT FOR GOLD AND SILVER MINING OPERATIONS

Name of Mine:	Noche Buena Gold Mine
Name of Mine Owner:	Fresnillo plc
Name of Mine Operator:	Minera Penmont S de R.L. de C. V.
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2.0 LOCATION DETAIL AND DESCRIPTION OF OPERATION

2.1 Mine Location

The Noche Buena Mine (Noche Buena) is located in the Altar desert approximately 65 kilometers (km) northeast of the city of Caborca and 90 km southeast of the city of Puerto Peñasco. The mine is approximately 45 km from the coast of the Gulf of California in the state of Sonora, Mexico (Figure 1). The elevation is approximately 250 meters (m) above mean seal level. The local topography is gently sloping to flat, with ephemeral watercourses and typical Sonoran Desert vegetation consisting of cactus, palo verde trees, ironwood trees, and various shrubs. The climate is hot and dry with approximately 200 to 250 millimeters (mm) of average annual rainfall, temperatures ranging from approximately 0 to 45 degrees centigrade, and an annual average evaporation rate of approximately 2,700 mm.

2.2 Background

Noche Buena is operated by Minera Penmont S. de R.L. de C.V (Minera Penmont) as a subsidiary of Fresnillo Plc (Fresnillo). Fresnillo is the 100 percent owner. Exploration began in 2009 and construction began in 2011. The mine has been operational since January 2013. The mine produces primarily gold but also some silver. Based on statistics from the first quarter of 2019 (Mines in Operation | Fresnillo plc), the average ore grade is approximately 0.50 and 0.22 grams per ton for gold and silver, respectively. Golder and silver production were approximately 30,100 and 12,000 ounces, respectively. Approximately 500 employees and an equal number of contractors work at Noche Buena.

Noche Buena is an open pit mine. Facilities consist of waste rock stockpiles, a heap leach facility (HLF), process ponds, a Merrill Crowe Plant, and various support facilities. The HLF has seven phases, although only Phases 6A, 6B, and 7A were active at the time of the site visit. Run-of-mine ore is placed on the heap leach pad for leaching via drip emitters with lime mixed into the ore after dumping. There are four process ponds: Pregnant Pond, Intermediate Pond, Contingency Pond 1, and Contingency Pond 2.

Noche Buena receives solid cyanide via isotankers. There is an offload facility for the isotankers. Five tanks are used for receiving, mixing, and distributing the reagent-grade cyanide: dissolution, dilution, storage, and two dosification tanks. A sixth tank for dilution is empty, disconnected, and out of service.

The Merrill Crowe Plant (Figure 2) consists of a clarification cone, clarifiers, deoxygenation towers, a zinc cone, filter presses, and a sedimentation pond (for clarifier wash water). A refinery is also located onsite.

The changes to the cyanide facilities since the initial certification audit were:

- Expansion of Contingency Pond 2
- Expansion of the HLF with Phases 6A, 6B, and 7A
- Relining of the Intermediate Pond
- Relining of the Pregnant Pond
- Run-on diversions around the new phases of the HLF
- Conversion of the warehouse formerly used for cyanide flobins to a non-cyanide warehouse

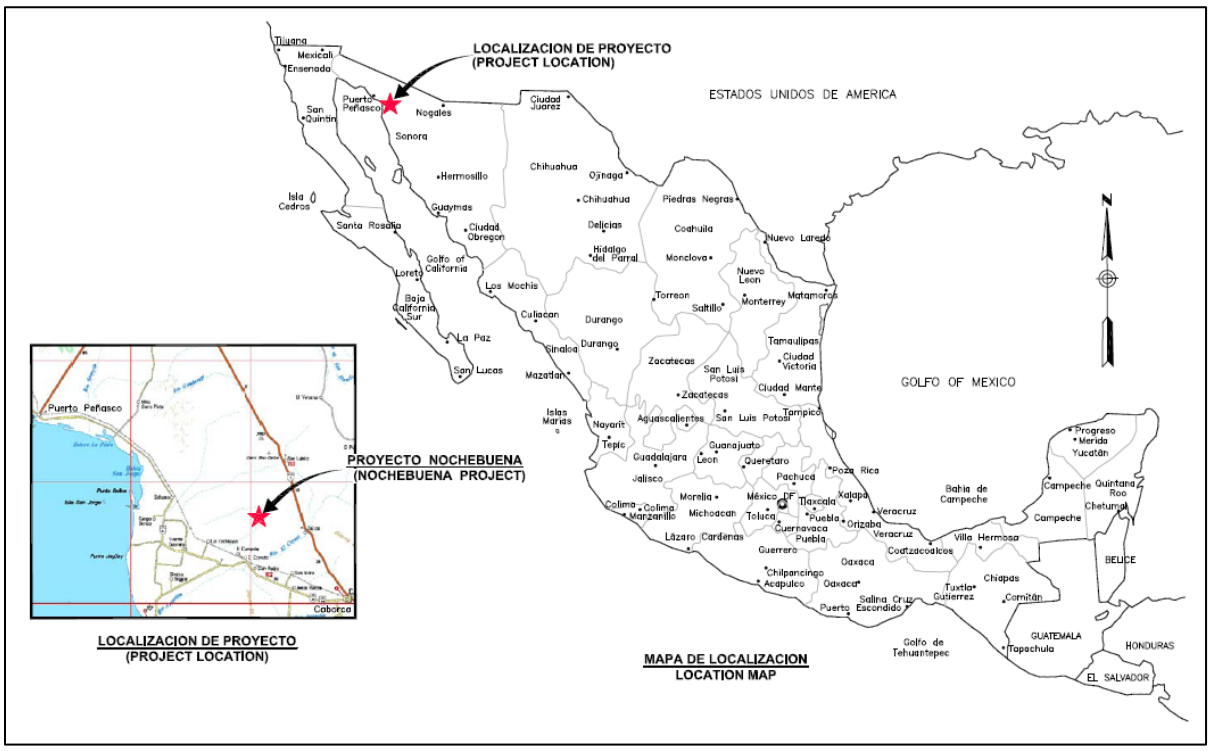


Figure 1: Location Map

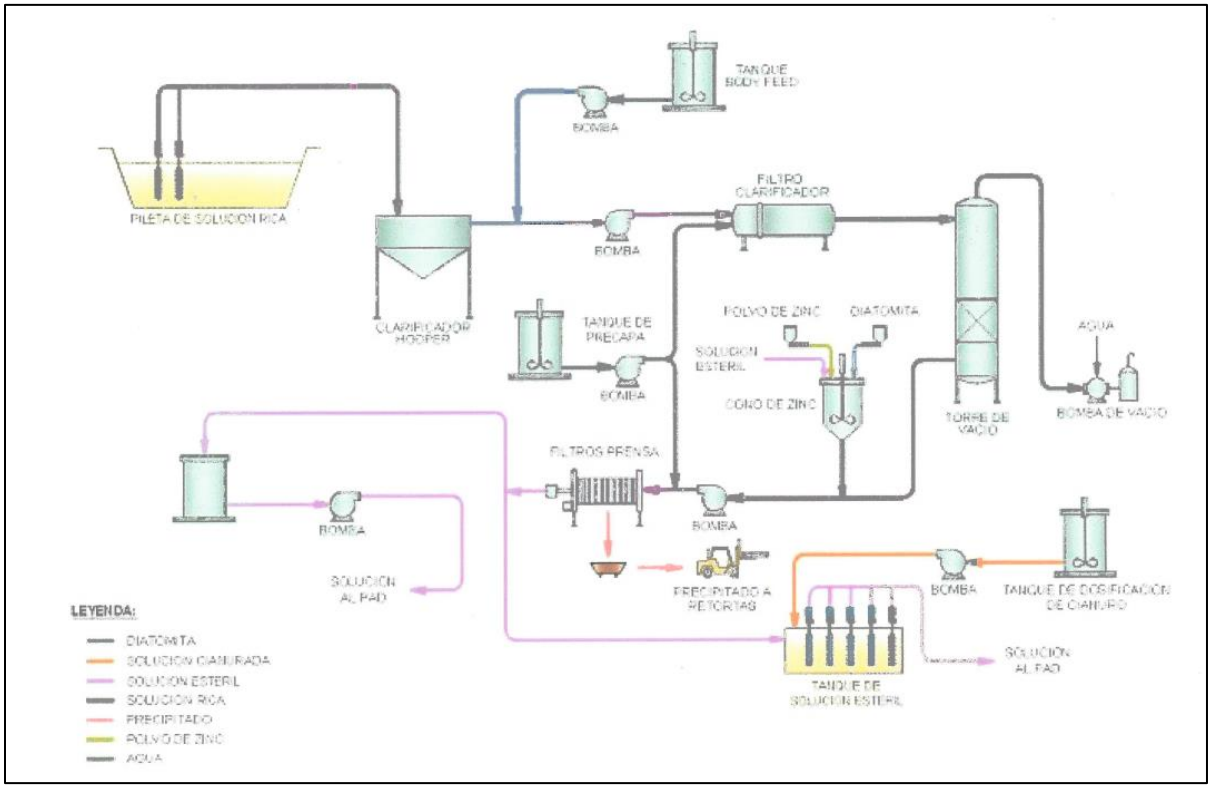


Figure 2: Process Flow Diagram (supplied by Noche Buena)

SUMMARY AUDIT REPORT
Auditors Findings

Noche Buena Mine is:	☒ **in full compliance with**	**The International Cyanide Management Code**
	☐ in substantial compliance with	
	☐ not in compliance with	

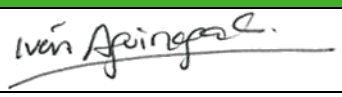
The operation has not experienced compliance problems during the previous three-year audit cycle.

Audit Company: Golder Associates Inc.

Audit Team Leader: Kent R. Johnejack, Lead Auditor and Mining Technical Specialist

Email: kjohnejack@golder.com

Name of Other Auditors

Name, Position	Signature
Ivon Aguinaga, Mining Technical Specialist	

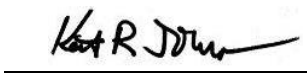
Dates of Audit

The initial certification audit was undertaken over four days from April 22 to 25, 2019.

I attest that I meet the criteria for knowledge, experience and conflict of interest for Code Verification Audit Team Leader, established by the International Cyanide Management Institute (ICMI) and that all members of the audit team meet the applicable criteria established by the ICMI for Verification Auditors.

I attest that this Summary Audit Report accurately describes the findings of the verification audit. I further attest that the verification audit was conducted in a professional manner in accordance with the International Cyanide Management Code (ICMC or Code) Verification Protocol for Cyanide Gold and Silver Mine Operations and using standard and accepted practices for health, safety and environmental audits.

Noche Buena Mine
Name of Facility


Signature of Lead Auditor

September 9, 2019
Date

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:

The operation is in full compliance with 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.

Noche Buena has purchased cyanide only from the Chemours Company Mexicana, S. De R.L. De C.V. (Chemours) during the recertification period. This cyanide has been produced either at Chemours' production plant in Memphis, USA or at the Australian Gold Reagents Pty Ltd (AGR) production plant in Kwinana, Australia. AGR is a co-producer of Chemours and Chemours has been supplying cyanide from AGR to the mine since April 2019 due to a production shortage during maintenance at its plant in Memphis.

Noche Buena has purchased cyanide under a supply agreement with Chemours (a supply agreement, dated August 2012, for the term between January 1, 2012 and December 31, 2015; an amendment to the 2012 supply agreement to extend the agreement terms to 2016; and a new supply agreement for the term 2017 to 2021). The supply agreement with Chemours contains language requiring that the cyanide be produced at a facility that has been certified as complying with the Code.

Chemours' production facility, the AGR co-production facility, and the packaging facility in Mexico are certified with the Code. Their most recent recertification was obtained on September 16, 2016. AGR's production plant is certified under the production requirements of the Code. Its most recent recertification was obtained on August 03, 2017. As part of the Chemours Mexican Supply Chain for cyanide distribution to Noche Buena, Chemours temporarily stores cyanide and/or transloads 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 during the recertification period.

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:

The operation is in full compliance with 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.

Noche Buena purchases cyanide from Chemours only. This cyanide is produced either at Chemours' production plant in Memphis, USA or at their co-producer's AGR plant in Kwinana, Australia. Chemours has been supplying cyanide from AGR to Noche Buena since April 2019 due to a production shortage at its plant in Memphis.

Clause 13 of the contract with Chemours states that the Seller shall comply and shall cause the Seller's product, and production and transportation personnel, distributors, and contractor carriers to comply with Code requirements. Since May 3, 2019, Chemours has added colorant (red dye) to the isotankers at its Hermosillo warehouse. AGR also has added dye at its production plant in Kwinana as referenced in its most recent audit report. The entire Chemours supply chain, through Mexico, and to the mine has been certified with the Code.

The auditors reviewed letters from Chemours describing the cyanide supply chain and the use of colorant.

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:

The operation is in full compliance with Standard of Practice 2.2; require that cyanide transporters implement appropriate emergency response plans and capabilities and employ adequate measures for cyanide management.

Noche Buena purchases cyanide from Chemours only. This cyanide is produced either at Chemours' production plant in Memphis, USA or at AGR's production plant in Kwinana, Australia. AGR is a co-producer of Chemours. Chemours has been supplying cyanide from AGR to the mine since April 2019 due to a production shortage at its

plant in Memphis. Chemours contracts and manages the entire supply chain until offloading of the cyanide at Noche Buena.

The supply contract with Chemours requires that the transporters be certified under the Code.

Noche Buena provided purchase invoices, and two letters from Chemours identifying the elements of the supply chain (i.e., producers, transporters and the warehouse in Hermosillo, Sonora). The entire Chemours supply chain through Mexico, and to the mine has been certified under the Code.

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:

The operation is in full compliance with 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.

Noche Buena receives solid cyanide in isotankers. Noche Buena has designed and constructed the offload and high-strength cyanide tanks in accordance with sound and accepted engineering practices. There are four high-strength tanks: dissolution, dilution, a second dilution tank that is not in use, and storage. There are two smaller dosification tanks with high-strength cyanide in a separate secondary containment. The offload and tank facility were designed by Servicios Industriales Peñoles S.A. de C.V., Engineering and Construction for Mines (SACMAG) and constructed in 2011. SACMAG is the Fresnillo in-house engineering and construction management group. Noche Buena contracted with SEI Tetra to provide Construction Quality Assurance (CQA) services. The CQA program included of inspection and testing of welding, soil compaction, and concrete testing. The finished construction was approved by the Noche Buena project manager, who has a degree in chemical engineer and a cedula (professional registration in Mexico).

The offload and tank facility are located away from people and surface waters. They are within the Merrill Crowe Plant, but away from offices and areas where people may congregate. Two fixed hydrogen cyanide gas (HCN) monitors are present. The nearest community (Ejido El Diamante) is located approximately 28 km southwest of the mine in a different basin. The potential for release to surface water is negligible because of the extreme aridity of the Sonoran Desert and the lack of any perennial surface water.

Isotankers are unloaded on a concrete ramp that allows for leakage to be recovered in a grated concrete channel bounded by raised hump at both ends of the ramp. The auditors observed the concrete ramp to be in good condition.

Noche Buena has installed level sensors in the six high-strength cyanide tanks to prevent overfilling. The sensors are set at 85 and 90 percent for high and high-high alarms, respectively. The instrumentation staff have maintained the sensors and the auditors also observed the control room screens that showed the sensors were functioning.

The high-strength cyanide tanks are located on concrete floors and concrete bases within concrete secondary containments that prevent seepage to the subsurface and are competent barriers to leakage. The four high-strength tanks are within a single secondary containment that has a sump with a float-operated pump that reports

to the barren tank. The two smaller dosification tanks with high-strength cyanide are in a separate secondary containment with a sump emptied by a manually operated pump that reports to the secondary containment for the four larger tanks. The auditors observed these concrete secondary containments to be in good condition.

Noche Buena stores cyanide in outdoor tanks with adequate ventilation and security, closed to precipitation entry, and separately from incompatible materials such as acids, strong oxidizers, and explosives, as well as apart from foods, feeds, and tobacco products.

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:

The operation is in full compliance with 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.

Noche Buena receives solid cyanide in isotankers and has implemented procedures to manage them after offloading. Empty isotankers are returned to the manufacturer to prevent re-use for any purpose other than holding cyanide. The isotanker offload procedure requires rinsing the upper part of the isotanker and securely closing valves after an offload.

Noche Buena has also implemented procedures to prevent exposures and releases during isotanker offloading. The procedure for offloading isotankers describes the operation of valves and couplings. It also cross-references separate procedures for timely cleanup of solid and liquid cyanide spills. Required personal protective equipment (PPE) includes harness, radio, portable HCN monitor, face shield, respirator, safety glasses, hard hat, Tyvek suit, and chemical-resistant gloves. The auditors reviewed completed checklists from throughout the recertification period and observed an offload to verify proper operation of valves and couplings, as well as use of proper PPE and observation by an operator from the observation room. Chemours indicated in writing that colorant has been added to the isotankers starting on May 1, 2019. AGR also has added dye at its production plant as referenced in its most recent audit report. Handling and stacking containers are inapplicable.

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:

The operation is in full compliance with 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.

The cyanide facilities at Noche Buena (i.e., those with Weak Acid Dissociable [WAD] cyanide greater than 0.5 milligrams per liter (mg/l) are:

- HLF consisting of seven phases
- Process ponds: Pregnant Pond, Intermediate Pond, Contingency Pond 1, and Contingency Pond 2
- High-strength cyanide system:
  - Isotanker offloading facility with four tanks: dissolution, dilution, a second dilution (not in use), and storage
  - Two dosification tanks that feeds the cyanide addition points at the barren tank and the zinc cone
- Merrill Crowe Plant, including a hopper vessel, clarifiers, barren tank, in-line pump boxes, zinc cone, deoxygenation towers, filter wash tank, sedimentation cells, and filter presses
- Associated pipelines, pumps, valves, and appurtenances
- Run-on diversion channels around the northern and eastern perimeter of the HLF

The changes to the cyanide facilities since the previous audit cycle are:

- 2016: Removal of the backup flobin mixing system, return of all flobins to the manufacturer, and retirement of the warehouse for storing cyanide
- 2016: Conversion of the lead nitrate tank to a second cyanide dosification tank for high-strength cyanide in 2016
- 2017: Expansion of the HLF with Phases 6A and 6B, expansion of Contingency Pond 2, and pipeline containment channel
- 2017: Relining of the Intermediate Pond
- 2018: Replacement-in-kind of the flobin preparation tank with a new tank named as a second dilution tank, which has not been put into service

- 2019: Expansion of the HLF with Phase 7A
- 2019: Relining of the Pregnant Pond (in progress at the time of report preparation)
- 2017-2019: New run-on diversion channels around the HLF expansion that tie into the former diversion channels

Noche Buena has operated under three high-level management systems relevant to cyanide and/or environmental management with the goal of preventing or controlling releases to the environment and exposures to the workers and communities: ISO 14001 Environmental Management System; ISO 45001 Occupational Health and Safety System; and the Manual for the Health, Safety, Environment and Community Relations System (or SSMARC by its acronym in Spanish). To implement these high-level programs, Noche Buena has developed detailed plans and programs identifying assumptions, parameters, and regulatory requirements: MAXIMO software for managing maintenance; program for environmental monitoring; emergency response plan; design reports and drawings; and a set of standard operating procedures. Noche Buena has reviewed and updated its procedures since the previous audit cycle in accordance with their internal policy. Specifically, the applicable procedures were updated in April 2019 to reflect the addition of colorant to high-strength cyanide solution by the manufacturer.

Noche Buena has implemented a written procedure for management of change that covers environmental and safety aspects.

Since the previous audit, Noche Buena has continued to implement the same five procedures that address upset conditions and contingencies. These procedures address general preparation and response to emergencies; contingency pond emergencies; slope failure; pipeline breaks; spill from secondary containment; stopping and starting the plant; immediate spill response; and spill cleanup.

Noche Buena has continued to implement an inspection program on an established frequency sufficient to assure and document that they are functioning properly. The inspection frequencies are daily to monthly, as well as per event. The inspections tanks, secondary containments, pipelines, pumps, sumps, valves, ponds, leak collection and recovery system (LCRS), run-on diversions, and the HLF. Corporate staff have completed non-destructive testing of the cyanide-related tanks and vessels annually and have determined they are suitable for continued use. Wildlife inspections have been performed daily at the plant, HLF, and ponds. Inspection forms have been retained. These forms contain the date, inspector name, check boxes for a list of specific items, and extra lines to document non-conforming conditions for referral to the maintenance department and scheduling in the Maximo software.

Noche Buena has continued to implement a maintenance program using the Maximo software to ensure equipment and devices function as necessary for safe cyanide management. Cyanide-related repairs are assigned immediate priority. The auditors reviewed maintenance histories from five randomly selected pieces of cyanide-related equipment to verify compliance. Noche Buena also has developed lists of standby pumps in the field, reserve pumps in the warehouse, and critical spare parts in the warehouse.

Noche Buena has four portable generators to prevent unintentional releases and exposures during power outages. The two larger portable generators can run the pumps from the ponds or plant to the HLF. Two other small portable generators are available at site, as well as a portable diesel pump. Startup testing and maintenance have been performed every two weeks, as documented in maintenance histories from the Maximo software.

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:

The operation is in full compliance with Standard of Practice 4.2; introduce management and operating systems to minimize cyanide use, thereby limiting concentrations of cyanide in mill tailings.

This Standard of Practice is inapplicable because Noche Buena does not have a mill or tailings storage facility.

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:

The operation is in full compliance with Standard of Practice 4.3; implement a comprehensive water management program to protect against unintentional releases.

Noche Buena has developed a comprehensive and probabilistic water balance for the HLF. The model is comprehensive in that it includes the all phases of the HLF and the process ponds. The model is probabilistic in that it has scenarios for the normal year plus a 100-year 24-hour storm and a wet year plus a 100-year 24-hour storm.

The water balance considers the input factors in a reasonable manner and as appropriate for the facilities and environment. The application rate to the HLF is 10 liters per hour per square meter. The design storm is the 100-year, 24-hour event of 185.4 mm. Precipitation and evaporation rates are based on data from two stations approximately 43 and 94 km away with similar elevations and topography. The configuration of the HLF and diversion channels prevent run-on. Freeze-thaw is inapplicable in the hot, dry desert. Evaporation losses and losses due to wetting of newly placed ore are considered. There are no losses due to decant, drainage and recycling systems, seepage to the subsurface, or discharges to surface water. The time to overtopping during pump or power failures has been estimated and has been greater than 30 hours throughout the recertification period. There are no discharges to surface water from treatment, destruction or regeneration systems. The water table is approximately 40 m below ground surface such that there is no interaction of groundwater with the HLF.

Noche Buena has implemented inspection and monitoring activities to reduce the potential for pond overtopping. The process ponds are inspected daily and three of the four ponds have level sensors that report to the control room. Run-on diversion channels have been inspected and maintained.

Noche Buena has designed and operated the process ponds with adequate freeboard above the design storage capacity. The Pregnant and Intermediate Ponds automatically overflow through spillways to the Contingency Ponds, and therefore freeboard is most applicable to the Contingency Ponds. Contingency Ponds 1 and 2 are operated with 0.8 and 1.0 m of freeboard, respectively.

In 2019, Noche Buena reviewed precipitation records and compared them to the design assumptions. The precipitation depth for the 100-year 24-hour storm was revised upward to 185.4 mm, or approximately 35 percent higher. This higher value has been used to estimate the time to pond overtopping during pump or power failures, showing that water management practices have been revised.

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:

The operation is in full compliance with Standard of Practice 4.4; implement measures to protect birds, other wildlife and livestock from adverse effects of cyanide process solutions.

Noche Buena has implemented physical restrictions to reduce the potential for exposure of wildlife and livestock to cyanide solutions. The plant and process ponds are surrounded by a chain link fence topped by razor wire and built on a concrete curb. The mine perimeter has a barbed wire fence. Process solution is conveyed to and from the HLF in pipelines and the lined ditch containing the pipelines is fenced. Floating liners were present on the Pregnant and Intermediate Ponds until 2017 and 2019, respectively. The Contingency Ponds are generally kept dry.

Noche Buena has demonstrated that the concentration of WAD cyanide was less than 50 mg/l in the open waters in the pregnant and intermediate ponds. Data from an external laboratory and the internal laboratory showed maximum WAD cyanide concentrations were approximately 25 mg/l in the pregnant solution present in the ponds and plant.

Noche Buena has not experienced any wildlife or bird mortality during the recertification period, based on implementation of daily inspections according to a written procedure and statements from the staff.

Noche Buena has implemented procedures to avoid significant ponding and limit overspray. Noche Buena uses drip irrigation on the HLF, with a few low-profile sprinklers on the interior sideslopes of Cell 7B. The auditors did not observe significant ponding or overspray on the active Cells 6A and 7B at the time of the site visit.

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:

The operation is in full compliance with Standard of Practice 4.5; implement a comprehensive water management program to protect against unintentional releases.

This Standard of Practice is inapplicable because there is no surface water in the vicinity of the mine due to the extreme aridity.

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:

The operation is in full compliance with Standard of Practice 4.6; implement measures designed to manage seepage from cyanide facilities to protect the beneficial uses of groundwater.

Noche Buena has implemented measures at the cyanide facilities to protect the beneficial uses of groundwater. These measures include geomembrane lining under the HLF with and LCRS around the perimeter; geomembrane lining with and LCRS for the Pregnant and Intermediate Ponds; geomembrane lining for the two Contingency Ponds; pipelines within the geomembrane lined channel between the HLF and ponds; concrete lining under the plant, including the mixing and storage area; concrete lined sedimentation cells; and a concrete lined secondary containment channel between the plant and the Pregnant Pond. The new Phases 6A, 6B, and 7 of the HLF were lined as described above for the existing phases. The expansion of the Contingency Pond 2 was also lined as described above for the existing Contingency Ponds.

The beneficial use of the groundwater is industrial in the vicinity of the mine. Rather than a comparing groundwater sampling results to a standard, and as required by the Environmental Impact Statement for the project, Noche Buena compares pre-mining results to the semi-annual sampling results in six monitoring wells to evaluate whether there has been a potential release to groundwater. Four wells are upgradient of the plant, ponds, and HLF; two wells are downgradient. The operational results from the recertification period were all non-detect for total cyanide for five of the six wells. The monitoring well between the HLF and the open pit recorded a mixture of non-detects and low concentrations of total cyanide without any obvious temporal trends. Noche Buena considers that these non-detects and low-level detections represented laboratory variability and/or laboratory contamination rather than releases to groundwater.

Noche Buena does not have mill or underground workings, and therefore mill tailings are not used as backfill. Groundwater has not been affected to date and remedial action is unnecessary.

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:

The operation is in full compliance with Standard of Practice 4.7; Provide spill prevention or containment measures for process tanks and pipelines.

Noche Buena has provided secondary containment measures for all cyanide unloading, storage, mixing, and process solution tanks. There are three containment systems at the plant. The four high-strength cyanide tanks are within a single concrete-walled containment. The two small dosification tanks are within a concrete-curbed containment. The remainder of the process tanks and vessels are within a concrete-walled containment. All cyanide-related tanks were installed on concrete foundations as an impermeable barrier to leakage.

Noche Buena has sized secondary containment measures for cyanide unloading, storage, mixing, and process tanks to more than 110 percent of the single largest tank within the containment. Calculation packages showed that each secondary containment has capacity in excess of 110 percent of the volume of the largest tank with the containment.

Noche Buena recovers solutions and/or precipitation in the three secondary containment systems for return to the process circuits, and therefore no written procedures are necessary to prevent discharge to the environment. The secondary containment for the four high-strength tanks has a sump with a float-operated pump that reports to the barren tank. The secondary containment for the two dosification tanks has a small sump with a manually-operated pump that reports to the secondary containment for the four larger high-strength tanks. This containment and sump are inspected regularly, and the pump run as needed. The secondary containment for the remainder of the plant reports to the Pregnant Pond via gravity flow in a grated concrete channel.

Noche Buena has provided secondary containment for all cyanide process tanks. Nonetheless, Noche Buena has also developed a procedure for cleanup of spills to soil to prevent impacts to surface and/or groundwater.

All cyanide-related pipelines have been installed within geomembrane-lined channels, over concrete floors, inside overhead trays, or within the HLF footprint to provide secondary containment. For the HLF, the geomembrane-lined channel has not changed along the south perimeter of Phases 1 and 2. However, the former channel along the south and east sides of Phase 3 was enlarged and extended to Phases 6A and 6B during this audit cycle.

Special protection measures for pipelines in the vicinity of surface water are inapplicable, as there is no surface water due to the extreme aridity in the Sonoran Desert.

Noche Buena has constructed the tanks and pipelines with stainless steel, mild steel, and high-density polyethylene (HDPE), all of which are compatible with cyanide and high pH.

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:

The operation is in full compliance with 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.

Compliance with this Standard of Practice was achieved during the initial audit for the Merrill Crowe Plant, Phases 1 to 5 of the HLF, the Pregnant Pond, the Intermediate Pond, Contingency Pond 1, and Contingency Pond 2.

For this audit cycle, Noche Buena has implemented CQA programs for the HLF Phase 6A and the Solution Canal; the HLF Phase 6B and the Expansion of Contingency Pond 2; relining of the Intermediate Pond; relining of the Pregnant Pond; and the HLF Phase 7. The CQA programs addressed suitability of materials, soil compaction, and geomembrane liners. CQA included observations, testing, and review of manufacturer's certifications. The CQA documentation also included as-built drawings.

Noche Buena has used appropriately qualified personnel to review CQA documentation that verifies the changes to the cyanide facilities were built in accordance with the designs and specifications. Noche Buena provided turnover forms signed by the site project manager, the corporate head of engineering and construction, and the operator of the completed works, as well as completion reports and weekly reports signed by engineers.

Noche Buena has retained electronic and physical copies of the CQA documentation for the cyanide facilities.

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:

The operation is in full compliance with Standard of Practice 4.9; implement monitoring programs to evaluate the effects of cyanide use on wildlife, surface and groundwater quality.

Noche Buena has contracted with a commercial laboratory, Analítica del Noroeste (Analítica), to perform field and laboratory activities for groundwater monitoring. Analítica has its own procedure manual for water sampling that was developed by qualified staff, as indicated by their certification from the Mexican agency in charge of such certifications. The Analítica procedure manual prescribes the sampling equipment, methods, containerization,

preservation, shipping instructions, and field forms. Analítica has performed the groundwater sampling since the start of the mine and the well locations are known and unchanged. Analítica has transported the samples to the laboratory. Total cyanide has been listed on the chain of custody forms as the species to be analyzed. Sampling conditions have been documented on field forms, including the containers, preservatives, sampling equipment, calibration of field instruments, weather conditions, list of constituents, and observations of other conditions that may affect the sample integrity.

Noche Buena has monitored for cyanide in groundwater down-gradient of the cyanide facilities. Noche Buena has installed six monitoring wells around the HLF, plant, and process ponds.

Noche Buena has documented wildlife inspections on field forms for the HLF and the plant/process ponds in accordance with its written procedure.

Noche Buena has conducted groundwater and wildlife monitoring at frequencies adequate to characterize the medium being monitored and to identify changes in a timely manner. Groundwater is monitored semi-annually and wildlife is monitored daily.

There are no discharges to surface water and surface water monitoring is inapplicable because of the extreme aridity at the site.

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:

The operation is in full compliance with Standard of Practice 5.1; plan and implement procedures for effective decommissioning of cyanide facilities to protect human health, wildlife and livestock.

Noche Buena has developed a reclamation and closure plan that specifically addresses decommissioning the cyanide facilities. The life-of-mine plan includes the process plant process ponds, and HLF; the cyanide warehouse was included even though it no longer is a cyanide facility this audit cycle. The plan covers the appropriate decommissioning activities: use or return to vendor of residual cyanide; recirculation of cyanide solutions to the HLF and continued gold recovery until WAD cyanide is less than 0.2 mg/l; and washing and decontamination of cyanide equipment prior to demolition. Noche Buena has developed a conceptual schedule for closure, which includes decommissioning. Decommissioning is scheduled for the definitive closure period (2022-2024). Noche Buena has reviewed and updated its closure plan, including decommissioning, during this audit cycle and during the previous audit cycle.

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 operation is in full compliance with Standard of Practice 5.2; establish an assurance mechanism capable of fully funding cyanide related decommissioning activities.

Noche Buena has developed an estimated cost based on third-party rates to fully fund decommissioning the cyanide facilities. The plan states that the unit costs were based on local and regional costs, costs reported by Fresnillo, and contractor costs. Noche Buena has reviewed and updated its decommissioning cost estimate during this audit cycle and during the previous audit cycle. Noche Buena provided a 2019 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 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:

The operation is in full compliance with Standard of Practice 6.1; identify potential cyanide exposure scenarios and take measure as necessary to eliminate, reduce and control them.

Noche Buena has developed operating procedures that describe the management and operation of the cyanide facilities. These procedures cover the safe operation of the cyanide facilities, describe the use of PPE, and address work inspections. The procedures have been developed for the cyanide offloading and storage facilities, the Merrill Crowe Plant, the HLF, the process ponds, and the contingency ponds. The procedures have been reviewed and updated, as needed, to reflect changes such as the addition of colorant to high-strength cyanide.

Noche Buena has implemented pre-work inspections prior to a cyanide offload event. Pre-work inspections include verification of valves, safety showers and eyewashes, cyanide kit, tank levels, pH, HCN values, and others. In addition, process inspections include cyanide tanks, pipes, valves, pumps, secondary containments, safety devices (e.g. safety showers, eyewash stations, cyanide kits and fire extinguishers), wildlife, and cover the cyanide offloading and storage areas, the Merrill Crowe Plant, the process ponds, and the HLF.

Noche Buena has implemented a procedure to evaluate changes in processes or operations that may affect worker health and safety. The procedure considers the involvement of process, environmental and safety personnel in the assessment of the proposed changes. The procedure is accompanied by a form to be completed as part of the evaluation of the proposed change. Worker protection measures are identified as part of the process.

Noche Buena actively solicits and considers worker input in developing procedures. These opportunities include daily safety meetings, training sessions, and worker observations by supervisors. Input from employees is also solicited during the preparation and/or review process of the procedures.

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:

The operation is in full compliance with 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.

Noche Buena has determined the appropriate pH for limiting the evolution of HCN gas during offloading and production activities. The recommended pH values for the different process circuits are presented in the operating procedures. Noche Buena monitors and maintains the appropriate pH to prevent the formation of HCN as recommended in the operating procedures. Fixed HCN monitors are installed in areas of potential exposure to cyanide (two in the cyanide reagent area, one in the clarifier area, one in the barren tank, and one in the zinc cone). In addition, operators use portable HCN meters to conduct maintenance and other cyanide tasks. HCN sensors are set to alarm at 4.7 parts per million (ppm) (alert/awareness) and 10 ppm (evacuation). HCN monitors are maintained, calibrated and inspected as recommended by the manufacturer. Warning signs are posted in areas where cyanide is used to alert workers that cyanide is present and that smoking, eating and drinking are not allowed. Also, signs with the required PPE to be worn in the different process areas have been placed. Pipes carrying cyanide are marked and the direction of flow is indicated with arrows on the pipe. Cyanide storage and process tanks are also marked as containing cyanide.

Chemours adds red dye to the isotanker at the time of loading the isotankers at its Hermosillo warehouse. Noche Buena has, therefore, adopted the practice of dying the cyanide solution for ease of identification since May 3, 2019. Operating procedures have been modified to clearly indicate that high-strength cyanide solution is dyed for clear identification of this solution. The supply agreement with Chemours did not specifically include the use of a colorant dye, however the auditors reviewed a letter from Chemours committing to add colorant dye to the isotankers since May 2019. AGR also has added dye at its production plant in Kwinana as referenced in its most recent audit report.

Showers, low-pressure eye washes, and dry powder fire extinguishers are located at strategic locations throughout the operation and are maintained, inspected and tested on a regular basis. Safety showers and eyewashes were operational. Safety Data Sheets (SDSs) and first aid procedures for cyanide are located in the process areas. Noche Buena has also placed signs at different points of the process areas describing first aid procedures related to cyanide. The instructions are in Spanish, the language of the workforce.

Noche Buena investigates all incidents in accordance with a written procedure. Noche Buena staff stated that no cyanide exposure incidents have occurred during the recertification period. In lieu of cyanide exposure incidents, the auditors reviewed an example of completed incident investigation for a 2018 non-cyanide related incident to verify that the investigation procedure has been implemented.

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:

The operation is in full compliance with Standard of Practice 6.3; develop and implement emergency response plans and procedures to respond to worker exposure to cyanide.

Noche Buena has water, oxygen, resuscitators, antidote kits, radios, telephones, alarm systems or other means of communications or emergency notification readily available for use at the process areas and the onsite medical clinic. In addition, automated external defibrillators (AEDs) and two ambulances are available. The auditors confirmed that all antidote kits are stored at the correct temperature and that the antidotes have not expired. First aid equipment has been inspected regularly.

Noche Buena has developed written procedures that address response measures for HCN releases and exposures. Procedures include cyanide antidote and oxygen administration, emergency transportation, recovery, decontamination, emergency communication and evacuation, reporting requirements, and others.

Noche Buena has onsite capability, consisting of equipment and trained staff, to provide first aid to workers exposed to cyanide. Noche Buena has an onsite medical clinic that is staffed with a physician and paramedics. Paramedics are qualified to provide medical/ emergency assistance. Noche Buena has also emergency responders and staff trained as first aid technicians, strategically placed in different operational areas in every shift. Noche Buena has developed procedures to transport workers exposed to cyanide to a qualified medical facility in Caborca for further treatment, if needed. Noche Buena has formal arrangements with the Santa Fe Clinic (“Clínica de Especialidades Santa Fe de Caborca”) in Caborca. Noche Buena has conducted three mock drills with exposure and release scenarios during the recertification period to test emergency procedures. Lessons learned from the drills have been incorporated into response planning.

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.

The operation is

☒ **in full compliance with**

☐ in substantial compliance with **Standard of Practice 7.1**

☐ not in compliance with

Summarize the basis for this finding:

The operation is in full compliance with Standard of Practice 7.1; prepare detailed emergency response plans for potential cyanide releases.

Noche Buena has developed plans and procedures that address emergency response to potential accidental releases of cyanide. Noche Buena plans and procedures contain measures for potential scenarios such as: 1) cyanide intoxication; 2) accidents during cyanide transportation; 3) releases during offloading and production activities 4) release of cyanide during fires and explosions; 5) pipe, valve or tank ruptures; 6) overtopping of ponds; 7) electrical power outages and pump failures; 8) uncontrolled seepage; 9) failure of the heap leach facility; 10) cyanide spill control and clean-up; and 11) for clearing site personnel and emergency evacuation.

Noche Buena does not assume responsibility for cyanide until it is offloaded into the cyanide dissolution tank as indicated in the supply agreement with Chemours. In the case of a transportation emergency (onsite or offsite), Chemours is responsible for the emergency response, as well as for the remediation and cleanup of any cyanide release. Noche Buena would assist in coordination with Chemours.

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

The operation is

☒ **in full compliance with**

☐ in substantial compliance with **Standard of Practice 7.2**

☐ not in compliance with

Summarize the basis for this finding:

The operation is in full compliance with Standard of Practice 7.2; involve site personnel and stakeholders in the planning process.

Noche Buena has involved its workforce and stakeholders (e.g., local response agencies, regulatory agencies and communities) in the emergency response planning and response process through training sessions, mock drills and community meetings.

Worker input in developing and evaluating health and safety procedures is via direct communication between supervisors and operators, training sessions, and participation in cyanide related mock drills.

Noche Buena has onsite capabilities to respond to cyanide emergencies (onsite medical clinic staffed with a doctor and paramedics; onsite ambulances, fire truck, and emergency responders trained in hazmat, fire fighting,

cyanide first aid and others). The Santa Fe Clinic in Caborca would provide additional cyanide medical treatment to the one that can be provided by the onsite doctor in case of a cyanide emergency. Noche Buena has made formalized arrangements with this clinic for cyanide related medical treatment. Other local agencies such the Red Cross, Civil Protection and the Caborca Fire Department would only provide support in case of site evacuation as necessary. Noche Buena has provided training in medical response and treatment related to cyanide to mine employees, local hospitals (including the Santa Fe Clinic), Red Cross, Fire Departments, and other external responders in May 2018.

The Secretariat of Environment and Natural Resources (SEMARNAT) has reviewed and approved the Noche Buena Accident Prevention Program that includes cyanide related emergency procedures.

The closest community (Ejido El Diamante) is located approximately 28 km southwest of the mine in a different basin and could not be affected from a cyanide release from the site. However, Noche Buena has developed a community program that covers interaction via meetings with 21 communities in the area. Also, Noche Buena organizes site tours on a regular basis. During meetings with the communities and site tours information about cyanide management is provided via presentations, and flyers on cyanide management and emergency response procedures.

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:

The operation is in full compliance with Standard of Practice 7.3; designate appropriate personnel and commit necessary equipment and resources for emergency response.

Noche Buena has committed in their emergency response procedures and plans the necessary emergency response equipment and first aid to manage cyanide incidents at the operation and to coordinate transportation to a local medical facility for further treatment. The Accident Prevention Program document defines the primary and alternative emergency responders including their responsibilities and level of authority in case of an emergency.

Noche Buena has identified its emergency response team and has an updated list of the team members (e.g., emergency coordinators, paramedics, brigade members and first aid technicians) including their name, shift and 24-hour contact information.

Noche Buena has emergency responders and doctors onsite to respond to a cyanide emergency. Emergency responders are trained in Hazmat, confined space, cyanide first aid, fire fighting, height rescue, collapsed structures, and Noche Buena emergency response procedures for cyanide exposures and releases. All emergency equipment is inspected on a regular basis.

The emergency response procedures and plans (i.e., the Accident Prevention Program) describes the role of outside responders and provide their contact information. Noche Buena has onsite capabilities to respond to cyanide emergencies. The Santa Fe Clinic in Caborca would provide additional cyanide medical. Noche Buena

has formal arrangements with this clinic. Other local agencies such the Red Cross, Civil Protection and the Caborca Fire Department would provide support in case of site evacuation. Noche Buena has provided training in medical response and treatment related to cyanide to local hospitals (including the Santa Fe Clinic), Red Cross, Fire Departments, and other external responders in May 2018. Through training in cyanide response to local responders and the agreement with the clinic, Noche Buena has confirmed that outside entities included in their emergency response procedures are aware of their involvement.

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 operation is in full compliance with Standard of Practice 7.4; develop procedures for internal and external emergency notification and reporting.

Noche Buena emergency response plans and procedures for internal and external notifications. These plans and procedures include the Manual of the Executive Contingency Plan, PS-Procedure HE-07-A01 - Contingency Plan, Procedure PS-HE-09 - Internal and External Communication, and Procedure PS-HE-07 - Preparation and Response to Emergencies Response). Internal notification covers Noche Buena management, emergency response coordinators and responders, onsite doctors, and others). External notification includes the local hospital, regulatory agencies, government agencies, external response agencies, 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:

The operation is in full compliance with 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.

Noche Buena procedures describe containment and remediation measures in case of a cyanide liquid spill and/or a solid cyanide spill. Procedures require sodium cyanide spills to be shovelled and swept into a suitable container and to keep the spilled material dry. Spilled cyanide solutions within the process plant are to be returned to the process circuit. Emergency containment structures would be constructed to minimize the extent of the release. Soils affected by spilled cyanide solutions are to be decontaminated with hypochlorite solution. Contaminated soil and spill clean-up materials are to be disposed at the HLF.

Procedures related to cyanide spills require that contaminated water and/or soils be monitored after a cyanide spill. Procedures describes the final cyanide concentration that will be allowed in residual soils as evidence that the spill has been completely cleaned up. Procedures also describe soil and groundwater sampling methods. There are no water bodies near Noche Buena.

Noche Buena does not consider the use of chemicals to treat cyanide released into surface waters. Safety and environmental personnel stated that there are no watercourses near Noche Buena due to the extreme aridity.

The closest community (Ejido El Diamante) is located approximately 28 km southwest of the mine in a different basin. Therefore, there is negligible risk that the water supply and the Ejido El Diamante would be adversely impacted in case of a cyanide release from the cyanide facilities. Noche Buena uses bottled water for drinking water supply.

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

The operation is

☒ **in full compliance with**

☐ in substantial compliance with **Standard of Practice 7.6**

☐ not in compliance with

Summarize the basis for this finding:

The operation is in full compliance with Standard of Practice 7.6; periodically evaluate response procedures and capabilities and revise them as needed.

Noche Buena has evaluated and updated its emergency response procedures at least every two years, following mock drills, and changes in emergency response procedures. Noche Buena has conducted mock drills based on likely cyanide release/exposure scenarios to test its response procedures and has incorporated lessons learned from the drills into its response planning. Mock drills have been conducted annually.

Procedure PS-HE-07 - Preparation and Response to Emergencies Response requires that emergency response procedures are evaluated and revised after any cyanide-related emergency requiring their implementation. No cyanide accidents/incidents have occurred at Noche Buena that have required changes to the procedures. Operational and response procedures have recently been updated to improve emergency response actions and capture changes such as the use of the colorant for clear identification of high-strength cyanide solution and the elimination of amyl nitrite from the first aid and response procedures.

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.

The operation is

- ☒ **in full compliance with**
- ☐ in substantial compliance with
- ☐ not in compliance with

Standard of Practice 8.1

Summarize the basis for this finding:

The operation is in full compliance with Standard of Practice 8.1; train workers to understand the hazards associated with cyanide use.

Noche Buena trains all site personnel who may encounter cyanide (including contractors) in cyanide hazard recognition via a new hire training. This training includes a general cyanide induction for all employees and a more specific training session in Cyanide Uses, Management and First Aid for process personnel. Training material covers cyanide characteristics, HCN formation, sodium cyanide transportation, cyanide spills, health effect, exposure sources and symptoms, limits, decontamination procedures, cyanide intoxication first aid procedures, PPE, emergency contact information, and others. In addition to this training, all employees working in process areas are required to undergo task training related to cyanide.

Noche Buena requires all employees to undertake refresher training in a course titled Sodium Cyanide: Uses, Management and First Aid annually. Refresher training utilizes the same materials as the original training. Refresher training is tracked using a training matrix that identifies each worker by department. Noche Buena retains employee training records including completed quizzes demonstrating an understanding of the training.

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

The operation is

- ☒ **in full compliance with**
- ☐ in substantial compliance with
- ☐ not in compliance with

Standard of Practice 8.2

Summarize the basis for this finding:

The operation is in full compliance with 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.

Noche Buena requires that all employees working with cyanide be trained in cyanide use and management as part of the New Hire training (Cyanide Uses, Management and First Aid). In addition to this training, all employees working in process areas are required to undergo task training related to cyanide prior to working with cyanide independently. Individual training using operating procedures is provided for each cyanide-related task. Operating procedures include the purpose of the procedure, required PPE, safety considerations, and the steps of each task.

Following task training, a new operator works first with a group of experienced operators for three months. The new operator is observed at the end of this period by his supervisor to evaluate his performance prior to working with cyanide independently.

Task training for operators is provided by qualified process personnel. Task training is provided by process coordinators that have several years of experience at the operation. Training in cyanide hazard recognition is also provided by plant coordinators that have train-the-trainer certifications, and/or have received annual training by Chemours on Cyanide Emergency Response and/or Hazmat training.

An annual refresher training program for operating procedures is included in a training matrix. This program includes the training elements necessary for each job involving cyanide management and lists the operating procedures to be covered for each employee and process area. Under the same matrix, Noche Buena tracks task training for each worker.

Noche Buena undertakes written tests to evaluate the effectiveness of the cyanide training. In addition, task specific training also includes an evaluation.

Training records are retained throughout an individual's employment. The records include the names of the employee and the trainer, the date of training, and the topics covered. Test results demonstrating an understanding of the training materials are also retained.

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

The operation is

☒ **in full compliance with**

☐ in substantial compliance with **Standard of Practice 8.3**

☐ not in compliance with

Summarize the basis for this finding:

The operation is in full compliance with Standard of Practice 8.3; train appropriate workers and personnel to respond to worker exposures and environmental releases of cyanide.

Personnel responsible for cyanide offloading, production, and maintenance, as well as emergency coordinators and emergency responders, are trained in procedures to be followed if cyanide is released, decontamination, and first aid procedures. This training is provided through the annual training in Sodium Cyanide: Uses, Management and First Aid; the task training; and the annual training program for the emergency responders. This last training also includes the use of response equipment. Emergency responders and process employees have participated in mock drills on likely cyanide release/exposure scenarios. In addition, emergency response coordinators and responders have received training in the Manual of the Executive Contingency Plan. In May 2018, onsite doctors and emergency responders participated in a training in medical response and treatment related to cyanide.

Noche Buena has made local response agencies and communities familiar with those elements of its emergency response procedures related to cyanide through training sessions and an agreement with a local medical clinic.

Noche Buena conducts annual mock drills based on likely cyanide environmental release/exposure from a training perspective to determine if personnel have the knowledge and skills required for effective response.

Noche Buena evaluated the mock drills and identified corrective actions. Debriefs were conducted to discuss lessons learned and corrective actions. No changes to response training were identified after the mock drills. The auditors, therefore, reviewed the mock drill reports and supporting documentation (including documentation on the acquisition of additional self-contained breathing apparatus's [SCBAs]) to verify that the personnel performed appropriately and that corrective actions were addressed.

Training records are retained and include the name of the employee and the trainer, the date of training, the topics covered, and test results demonstrating an understanding of the training materials.

PRINCIPLE 9 – DIALOGUE

Engage in Public Consultation and Disclosure

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

The operation is

☒ **in full compliance with**

☐ in substantial compliance with **Standard of Practice 9.1**

☐ not in compliance with

Summarize the basis for this finding:

The operation is in full compliance with Standard of Practice 9.1; provide stakeholders with the opportunity to communicate issues of concern.

Noche Buena maintains an open-door policy that provides the opportunity for members of the public to communicate issues of concern regarding the management of cyanide at the mine. Opportunities have been provided throughout the recertification period by community meetings, direct contact with stakeholders, tours, training, a complaint program, and the Fresnillo website. The Fresnillo website has contact information and information about the use of cyanide and the mine responsible cyanide management program.

Noche Buena has developed a program for 21 communities in the area that included interactions at the World Water Day and the World Environmental Day. In addition, Noche Buena has a program to receive and address complaints. No complaints related to cyanide have been received during the recertification period. Organized tours take place on a regular basis. During meetings with the communities and the site tours, information on cyanide management is provided.

External response agencies (e.g., Red Cross, Fire Departments, and local hospitals) have participated in training in medical response and treatment related to cyanide provided by Noche Buena in May 2018.

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

The operation is

☒ **in full compliance with**

☐ in substantial compliance with **Standard of Practice 9.2**

☐ not in compliance with

Summarize the basis for this finding:

The operation is in full compliance with Standard of Practice 9.2; initiate dialogue describing cyanide management procedures and responsively address identified concerns.

Noche Buena has provided opportunities to interact with stakeholders and provide them information regarding cyanide management. Noche Buena has developed a program for 21 communities in the area that includes meetings and events (e.g., the World Water Day and the World Environmental Day). In addition, Noche Buena has a complaint program. No complaints related to cyanide have been received during the recertification period. Organized tours of the mine site take place on a regular basis and a variety of people including worker's families,

students, and other stakeholders, have visited the site. During meetings with the communities and the site tours, information on cyanide management is provided. The Fresnillo website has contact information and information about cyanide use and management. External response agencies (e.g., Red Cross, Fire Departments, and local hospitals) have participated in a training in medical response and treatment related to cyanide provided by Noche Buena in May 2018.

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

The operation is

☒ **in full compliance with**

☐ in substantial compliance with **Standard of Practice 9.3**

☐ not in compliance with

Summarize the basis for this finding:

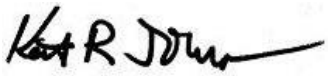
The operation is in full compliance with Standard of Practice 9.3; make appropriate operational and environmental information regarding cyanide available to stakeholders.

Noche Buena has disseminated information regarding cyanide management in written and oral form. Written materials include PowerPoint presentations, articles in magazines and the Fresnillo website, leaflets/flyers, and others. Noche Buena also has disseminated information orally during meetings with communities and tours of the process facilities, notwithstanding that the approximately 98.5 percent of the population is literate.

Noche Buena is required to report cyanide-related hospitalizations and fatalities to the PROFEPA) within three days of the event. In the event of an exposure incident, Noche Buena would report to the Secretaria del Trabajo y Prevision Social (STPS) and cyanide-related spills to the Procuraduria Federal de Proteccion al Ambiente (PROFEPA). These federal agencies would make the information available to the public. No cyanide-related hospitalizations, fatalities, or spills occurred during the recertification period.

Signature Page

Golder Associates Inc.



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