

ICMI Cyanide Code Gold Mining Recertification Audit

Summary Audit Report

**Golden Queen Mining Company,
Soledad Mountain Mine**

Kern County, California, USA

**Submitted to:
The International Cyanide Management Institute
1400 I Street, NW – Suite 550
Washington, DC 20005
USA**

2022 Audit Cycle



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SOLEDAD MOUNTAIN MINE
ICMC SUMMARY AUDIT REPORT

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Mining Operation: Soledad Mountain Mine

Mine Owner: Golden Queen Mining Company, LLC

Mine Operator: Golden Queen Mining Company, LLC

Name of Responsible Manager: Mark Fullenwider, CEO

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Location and description of the operation

The Soledad Mountain mine location is presented in the picture below



The Soledad Mountain Mine (Soledad Mountain) is an open-pit, heap leach mine owned and operated by Golden Queen Mining Company, LLC (GQM). The mine is located in Kern County, California approximately five miles south of the town of Mojave, California and 23 miles north of Lancaster, California, just west of Highway 14 on Silver Queen Road (see Figure 1). Access to the property is via good quality paved roads.

GQM began operations at Soledad Mountain in January 2016, announcing full commercial production on December 19, 2016. Soledad Mountain has shipped approximately 253,000 ounces of gold and 2,680,000 ounces of silver since the first pour on March 1, 2016.

Ore is hauled by truck from the open pits to a primary crusher, where it is crushed and conveyed to a coarse ore stockpile. From the coarse ore stockpile, ore feeds to the primary screen, the secondary crusher and finally, a high-pressure grinding roll (“HPGR”). GQM adds cement to the crushed ore as a binder to ensure good permeability of the ore stacked on the heap and to control the pH of the leach solution. The HPGR discharge is conveyed to a fine ore stockpile and then conveyed by an overland conveyor to a movable conveyor and stacker system (i.e., grasshopper conveyors and a radial stacker) located on the heap leach pad. The radial stackers places the agglomerated ore on the active portion of the heap for leaching with process solution using drip irrigation.

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GQM will ultimately construct two heap leach pads in phases, Phase 1 pad and Phase 2 pad. The Phase 2 pad will be constructed once the existing Phase 1 pad nears capacity or as contingency capacity to ensure planned recovery of gold and silver.

Two 18-inch diameter high-density polyethylene (“HDPE”) pipes within an HDPE-lined channel running along the northern edge of the Phase 1 heap leach pad, collect pregnant (silver and gold bearing) process solutions from the heap. The pipes convey pregnant solution by gravity to a concrete pump box, from which the solution is pumped to the gold and silver recovery plant. The lined channel provides secondary containment for the solution conveyance pipes.

The operation employs the Merrill-Crowe process (zinc precipitation process) to extract gold and silver from the pregnant leach solution. In the Merrill-Crowe process, suspended solids and dissolved oxygen are first removed from the pregnant solution. Clarifying filters are used to remove the suspended solids to less than one part per million (“ppm”). Zinc dust metered into the deaerated solution combines with the cyanide in a rapid, cementation-type reaction and gold and silver are precipitated as micron-sized particles of metallic gold and silver.

After precipitation, the solution is pumped to plate and frame filters where the gold and silver particles are removed, at which point the solution is termed, barren. These filters are located inside the refinery and this is where all subsequent processing takes place. From the refinery, the barren solution flows to the Barren Solution Tank where reagent-strength cyanide solution is added to raise the cyanide concentration of the barren solution to the desired level prior to pumping to the heap.

Within the refinery, mercury present in pregnant solution is precipitated with the gold and silver. The gold and silver precipitate is removed manually from the plate and frame filters and stored in mercury retort pans. Then the precipitate is heated in the mercury retort where water and mercury vapors are condensed and collected in the retort condensing system and the mercury trap. The dried precipitate is mixed with selected fluxes (typically silica, borax and soda ash) and melted in an induction furnace. Impurities in the melt combine with the fluxes to form slag, which is tapped as required and poured into slag pots. The molten mix of gold and silver (i.e., the doré) is poured into molds, cooled, cleaned and shipped to a commercial refinery where gold and silver bullion are produced for final sale.

A lined event pond (i.e., the overflow pond), located immediately downgradient of the pump box, is designed to provide adequate capacity for the retention of any operational upsets plus precipitation from the design storm event. In order to more efficiently manage flows that exceed the pump box capacity during large precipitation storm events, the overflow pond has a divider berm, which creates a smaller operational pond (west pond) and a larger surplus pond (east pond). The combined volume of the two ponds when the divider berm is submerged is approximately 27 million gallons allowing for two feet of freeboard.

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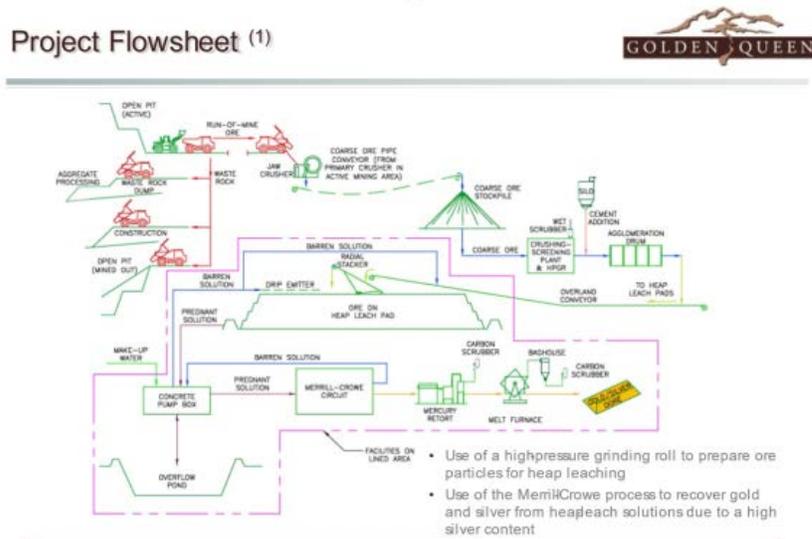
Sodium cyanide is delivered to Soledad Mountain as an aqueous solution in a tanker truck directly from the manufacturer's production plant located in Winnemucca, Nevada. The solution is pumped from the tanker truck to the Cyanide Storage Tank located outside the Merrill-Crowe Plant. The weak-acid dissociable ("WAD") cyanide concentration of the liquid sodium cyanide delivered to the site is 300,000 milligrams per liter ("mg/L"). Aside from this reagent-grade cyanide, free cyanide concentrations in the pregnant and barren solutions average approximately 250 mg/L and 300 mg/L, respectively, throughout the process circuit.

The scope of the recertification audit includes the following cyanide facilities: Leach pad Stages 1, 2 and 3; leach pad solution channel with Leach Collection Recovery Systems (LCRS) and pipelines, overflow ponds east and west with LCRS, pregnant solution pump box, diatomaceous earth settling pond (DE Settling Pond), solution channel and pipelines between the leach pad and the process plant; cyanide storage area including a liquid cyanide storage tank; the Merrill Crowe plant; and a barren tank and de-aeration tower area. There are no tailings facilities nor cyanide destruction facilities at GQM.

New facilities constructed since the initial certification audit include an expansion of the leach pad (Stage 3), which was commissioned in the last quarter of 2021 and includes additional leach pad areas with geomembrane and a solution channel with LCRS and pipelines; and the Intermediate Leach System (ILS), which was commissioned in 2021.

As mentioned above, sodium cyanide is delivered to Soledad Mountain as an aqueous solution in a tanker truck directly from the manufacturer's production plant located in Winnemucca, Nevada.

The Soledad Mountain ore processing flowsheet is presented below:



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Auditor's Finding

The International Cyanide Management Institute (ICMI) approved Audit Team verified that the Soledad Mountain operation is in **SUBSTANTIAL COMPLIANCE** with ICMI Cyanide Code requirements for Gold Mining operations.

This operation was found in substantial compliance with the Cyanide Code based on the audit findings discussed in this report under the following Standard(s) of Practice: 4.1, 5.1, 6.2, 7.2, 7.6, and 8.3

Soledad Mountain has experienced zero significant cyanide incidents during this 3-year recertification audit cycle.

This operation was determined to be in SUBSTANTIAL COMPLIANCE with the International Cyanide Management Code.

Auditor's Attestation

Audit Company:	SmartAccEss Socio Environmental Consulting, LLC
Lead Auditor:	Luis (Tito) Campos E-mail: titocampos@smartaccess.us
Mining Technical Auditor:	Adam House 
Date(s) of Audit:	January 10 th – 13 th , 2022

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 and that all members of the audit team meet the applicable criteria established by the International Cyanide Management Institute for Code Verification Auditors.

I attest that this 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 Institute for Mining Operations Verification Protocol and using standard and accepted practices for health, safety and environmental audits.

Soledad Mountain Mine
Name of Operations


Signature of Lead Auditor

January 13th, 2022
Date

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SUMMARY AUDIT REPORT

1. *PRODUCTION AND PURCHASE*: 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 certified manufacturers employing appropriate practices and procedures to limit exposure of their workforce to cyanide, and to prevent releases of cyanide to the environment.

The operation is: in full compliance
 in substantial compliance
 not in compliance with Standard of Practice 1.1

Discuss the basis for this Finding/Deficiencies Identified:

During the recertification period from January 17, 2019, to present, the Golden Queen Mine (GQM) purchased cyanide exclusively from Cyanco Company LLC (Cyanco). Cyanco has been the sole supplier of cyanide to GQM since contract initiation in 2015. The agreement was initially in place through 2020 and has been renewed for an additional two-year term through December 31, 2022.

Certification status for these facilities was verified by reviewing the ICMI website and the latest summary audit report.

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

Standards of Practice

2.1 Require that cyanide is safely managed through the entire transportation and delivery process from the production facility to the mine by use of certified transport with clear lines of responsibility for safety, security, release prevention, training and emergency response.

The operation is: in full compliance
 in substantial compliance

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not in compliance with Standard of Practice 2.1

Discuss the basis for the Finding/Deficiencies Identified:

Cyanco provides shipping papers to GQM documenting chain of custody from the point that the trailer is filled through offload at the mine site. Review of sample paperwork for the recertification period indicates that this practice has remained consistent since the date of the initial certification audit.

No interim storage takes place between the production facility and the storage tank at the mine site. Bills of Lading for cyanide deliveries show that the cyanide was produced by Cyanco and transported by TransWood to GQM, and TransWood is the sole transporter of cyanide to the site.

Maintenance of chain of custody records within the transportation segment were addressed by reviewing the TransWood recertification records covering the period. The most recent certification occurred on December 10, 2019. The records were reviewed and found to be acceptable in each of the Summary Audit Reports (SARs) posted on the ICMI website for the noted audits. This audit item is therefore considered acceptable.

During the audit, it was verified through the ICMI's website, letters, and e-mails, that the sole cyanide transporter involved in Cyanco's cyanide supply chain to GQM was currently Code certified and has maintained certification since 2006.

No third-party providers were used to transport cyanide to GQM.

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

Standards of Practice

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

The operation is: in full compliance
 in substantial compliance
 not in compliance with Standard of Practice 3.1

Discuss the basis for this Finding/Deficiencies Identified:

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GQM has cyanide offloading and storage facilities that were designed and constructed with solid international engineering practices, as determined by the initial certification audit in 2018, and remain substantially unchanged since that time. Kappes Cassiday Associates designed the Merrill Crowe Plant, including the cyanide offload facility. GQM also has evidence that in January 2016, a Cyanco representative evaluated the offload and storage facilities prior to approving the first shipment of cyanide to the site. In addition, under requirements of the California Accidental Release Prevention (“Cal/ARP”) Program, a qualified engineer performed a walkthrough of the facility as part of a required Hazard Review designed to satisfy the seismic provisions of the California Building Code.

GQM receives cyanide in liquid form. The liquid cyanide storage tank is located outside of the Merrill Crowe plant on concrete hardstanding maintained in good condition. GQM maintains design and drawings for the whole plant area including the cyanide storage tank area. The drawings includes foundation, concrete, and structure specifications. The cyanide tank is located within containment concrete berms, which is connected to the larger Merrill Crowe plant secondary containment and ultimately to the overflow pond, providing additional capacity above the 110% volume of the tank. In addition, the cyanide tank secondary containment has a sump and automatic pump system to convey any collected fluids to the Diatomaceous Earth (DE) Settling pond (sludge settling pond). The cyanide tank area is also subject to daily inspections at shift start to detect any obvious releases or failure in containment.

The GQM offloading and storage facilities for liquid cyanide are located outside of the Merrill Crowe plant with adequate ventilation. These facilities remain substantially unchanged since the initial certification audit. These facilities are not located near any offices or places where workers might congregate. There is a HCN monitor in the cyanide storage tank area with an audible alarm to alert workers in case of a HCN release. Appropriate warning signage is placed at these facilities to alert operators of cyanide presence and hazards associated with it. Although the offloading and storage facilities do not have its own fenced area, they are located within the fenced and secured areas of the process plant where public access is controlled. GQM mine is located in an arid area and there is no surface water in the vicinity. The nearest ephemeral drainage is located approximately 200 feet north of the Merrill-Crowe Plant, running along the south side of Silver Queen Road.

GQM cyanide offload area has a concrete pad for the trucks carrying liquid cyanide. This pad is constructed with cast-in-place reinforced concrete to prevent seepage to the subsurface. The pad is sloped and connected to the secondary containment of the cyanide storage tank that has a sump and automatic pump to collect any potential spillage during offloading, and is also connected to the larger Merrill Crowe secondary containment area. These facilities remain substantially unchanged since the initial certification audit. These areas are inspected daily to detect any deficiencies. The field portion of the audit verified that the concrete pad is in good condition, with no significant damage, cracking or spalling evident.

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GQM has a storage tank for liquid cyanide. There is an ultrasonic level indicator and a high-level alarm installed in the tank at 80% capacity to prevent overfilling during offload events. These levels are continuously monitored from the control room to ensure they are operational. Arrangements remain unchanged since the 2018 recertification audit. The auditors observed screenshots in the control room showing that the level indicators were functioning correctly.

The offload standard procedure is designed to prevent overfilling of the tank. The operators verify that the tank levels are low enough to receive the expected delivery. In addition, the cyanide supplier, Cyanco, has remote telemetry monitoring of the cyanide tank level to track cyanide usage and inventory, allowing them to dispatch cyanide loads when needed. The cyanide delivery driver is required to verify the tank levels prior to offloading. Tank levels before and after cyanide offloading are documented in the Cyanco's bills of lading and also by GQM operator in a cyanide offloading checklist.

The reliability and the functionality of the level indicator is maintained through checks of tank level, checks for the offloads, and routine monitoring by the operations. Although the implementation of a preventive maintenance program for the high level alarm sensor was included in the Corrective Action Plan issued during the previous certification audit, GQM failed to implement it for this recertification period, and as such, no maintenance records for 2019, 2020 and 2021 were available for review. During the field portion of the audit, GQM conducted a preventive maintenance of the high level alarm sensor and created a preventive maintenance schedule in the ManagerPlus maintenance software, which will be conducted every six months. Subsequent to the field visit, GQM provided evidence of maintenance records for one additional preventive maintenance event conducted in July 2022. No further action is required to be in compliance with the Code.

The cyanide storage tank is located outside of the Merrill Crowe plant and contained within concrete berms with good condition concrete flooring to avoid infiltration. Arrangements remain unchanged since the previous certification audit. This containment area is also connected with the larger Merrill Crowe secondary containment which provides additional capacity to contain at least 110% volume of the tank. In addition, there is an automatic sump pump that maintains the secondary containments free of any fluids. The bermed containment area has been verified during the field audit. The berms and containment areas are also subject to regular daily inspections. Arrangements remain unchanged since the previous recertification audit. During the field inspection, the cyanide tank containment area was observed to be in relative good condition, however, there were slight cracks in the concrete floor that needed to be repaired to provide adequate containment. Subsequent to the field visit, GQM provided evidence that this condition has been corrected. No additional action is required to be in compliance with the Code.

The cyanide storage area for liquid cyanide remain substantially unchanged since the initial certification audit. The cyanide storage tank is located outside of the Merrill Crowe plant in an open-air environment, and is vented on top. There is a fixed HCN monitor and windsocks to indicate the wind direction. Build-up of hydrogen cyanide gas is unlikely to occur. The offloading

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and liquid cyanide storage facility does not have its own fenced areas, however, they are located within the fenced and secured areas of the mine where public access is controlled. There is a warning signage indicating that only authorized personnel are allowed in the area. The cyanide storage area is dedicated to liquid sodium cyanide only, with no other materials permitted to be stored. Liquid cyanide is stored in a carbon steel tank located within a concrete secondary containment. No storage of other materials was observed during the field inspection. Mixing with incompatible materials is unlikely to occur.

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

- The operation is: in full compliance
 in substantial compliance
 not in compliance with Standard of Practice 3.2

Discuss the basis for this Finding/Deficiencies Identified:

GQM only uses liquid cyanide delivered in tanker trucks; no drums or wooden crates are involved. Cyanco/TransWood's offloading procedure requires the driver to monitor and control the entire offload operation. The procedure also details responses to any leaks or spillage. At the end of the offload, the driver is required to inspect the truck by walking completely around the tractor-trailer before moving it. If there is any spillage or residue on the outside of the truck, offload piping, or pad, the driver washes it off where the material is collected in the offloading pad sump.

In addition, the Standard Operating Procedure (SOP or procedure) "Cyanide Off Load" specifies that GQM personnel shall monitor the connection / disconnection of the offloading process. The procedure also indicates that any spilled product (on containment) is to be noted and cleaned up immediately, as appropriate, and to report a product release (off containment) to the area supervisors and environmental departments to determine appropriate clean up and disposal. Any spills or leaks related to a cyanide offload are captured in the secondary containment sump and automatically pumped into the process circuit.

GQM has SOP "Cyanide Off load" that outlines the requirements for inspection, observation and offloading of liquid cyanide. GQM also has a Cyanide Delivery Inspection / Checklist that is used by process personnel to inspect and monitor the offloads. The checklist includes inspection of the emergency shower and eye wash station, HCN monitor, and to ensure that the area is safe to initiate offloading activities. In addition, Cyanco/TransWood's offloading procedure "Sodium Cyanide Delivery SOP Cyanco" describes safe practices to complete the offload. Both the transporter and operator have to confirm that the storage tank has sufficient capacity for the offload. The bills of lading document the pH of the liquid cyanide and tank levels prior and after

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offloading. The operators sign off the form to authorize the offload. The operators have radios for communication with the control room in the event of an emergency. GQM operators are familiar with the Cyanco/TransWood delivery and emergency shut off procedures. SOP "Cyanide Off load" also includes a requirement for immediate clean up any spilled cyanide. No spills related to cyanide offloading were reported during this recertification cycle. SOP "Cyanide Off load" requires GQM personnel to use the appropriate PPE during offloading activities. As GQM personnel only participates observing the connection / disconnection of the offloading process that is conducted by the Cyanco/TransWood driver, general Personal Protective Equipment (PPE) for the task only includes hard toe shoes, safety glasses, rubber gloves, and hardhat. A radio is also carried at all times during cyanide delivery. In case of an emergency during offload, additional PPE is available for GQM personnel to respond to the emergency. The liquid cyanide already comes with a red colorant dye. This was verified by the auditors during the field visit. A cyanide offloading event was observed during the audit. The review indicated that the GQM has appropriate SOPs and practices to handle and offload cyanide solutions in a safe manner.

4. OPERATIONS: Manage cyanide process solutions and waste streams to protect human health and the environment.

Standards of Practice

4.1 Implement management and operating systems designed to protect human health and the environment including contingency planning and inspection and preventive maintenance procedures.

- The operation is: in full compliance
 in substantial compliance
 not in compliance with Standard of Practice 4.1

Discuss the basis for the Finding/Deficiencies Identified:

The scope of the recertification audit includes the following cyanide facilities: Leach pad Stages 1, 2 and 3; leach pad solution channel with Leach Collection Recovery Systems (LCRS) and pipelines, overflow ponds east and west with LCRS, pregnant solution pump box, diatomaceous earth settling pond (DE Settling Pond), solution channel and pipelines between the leach pad and the process plant; cyanide storage area including a liquid cyanide storage tank; the Merrill Crowe plant; and a barren tank and de-aeration tower area. There are no tailings facilities nor cyanide destruction facilities at GQM.

GQM has developed a certain number of procedures for the safe operation of cyanide facilities, including cyanide offloading, and operation of the Merrill Crowe plant. The procedures reviewed include a description of the tasks to be performed and PPE requirements. The current set of

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procedures for the Merrill Crowe plant is not complete, as several activities in the plant that involve cyanide management have not been documented. In addition, there are no comprehensive documented procedures for management of cyanide in the leach pad. It is important to note that this Code requirement is outstanding from the previous certification audit and was included in a Corrective Action Plan (CAP) that was issued with the initial certification report. During preparation of this report, GQM sent evidence of a list of procedures required for all cyanide-related tasks (both for the Merrill Crowe and leach pad area), and written procedures developed for safe operation of cyanide facilities. In addition, during review of this report, GQM sent additional evidence of communication/training of these procedures to the operators. No additional action is required to be in compliance with the Code.

Critical parameters for the safe operation of cyanide facilities at GQM are included in the documents such as the Waste Discharge Requirement (WDR) permit, dated April 2020 includes maximum operating levels for the overflow ponds east and west, which has been defined at 2 feet of freeboard. The ponds levels are monitored on a daily basis. There are no discharges of treated water in GQM; as such, there is no limit for cyanide in water discharges. The document "Water Balance for Soledad Mountain Mine", dated November 2016, prepared by Golder, includes the design storm event for the overflow ponds (5.17" for 1,000 year/ 24-hour storm event). GQM has not established a maximum level of cyanide concentrations in the overflow ponds or during leaching activities, as these concentrations largely depends on the operational needs. To protect birds and other wildlife from the adverse effects of cyanide process solutions, GQM has implemented controls in ponds that could have cyanide concentrations higher than 50 mg/l WAD cyanide, such as perimeter fences, bird balls, daily inspections, among others.

GQM has developed and implemented certain manuals and procedures for cyanide related tasks, which describe the standard practices necessary for the safe and environmentally sound operation of cyanide facilities. The Waste Discharge Requirement (WDR) permit, dated April 2020 includes maximum operating levels for the overflow ponds east and west, which has been defined at 2 feet of freeboard. The pond levels are monitored online on a daily basis. The Merrill-Crowe Plant operating manual also identify the plant design assumptions and operating parameters.

GQM has developed and implemented a daily inspection program for all mine facilities that includes also cyanide facilities. There is an "employee daily pre-shift work area inspection" form (daily inspection form) that is completed by workers prior to initiating their activities. This form is universal for all departments and has been in place since September 2021. Prior to that date, different inspection forms were used for each facility. In relation to cyanide facilities, the daily inspection form includes emergency showers and eye wash stations; fire extinguishers; cyanide offload, pregnant and barren pipelines; tanks; secondary containments; wildlife presence or mortalities; ponding on heap leach pad; leach pad solution channel; overflow ponds; pregnant solution pump box; valves, pumps and pipes; leakages; spill kits; among others. In addition, GQM conducts routine monitoring of groundwater, leak detection and vadose zone systems, and

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stormwater diversion structures, as well as inspections to perimeter fencing surrounding the Merrill-Crowe Plant and the overflow pond areas.

The inspection program of cyanide facilities, including offloading and storage activities, and the frequency of inspections were found to be sufficient to assure that the operation is safe and functioning within design parameters. The auditors reviewed inspections records for the last 3 years and verified that in general inspections are conducted on a consistent manner at the Merrill Crowe facilities. For the leach pad facilities, evidence of documented inspections before September 2021 were not available for review by the auditors. During preparation of this report, GQM provided additional examples of completed inspections to the leach pad areas. It is the professional opinion of the auditors that GQM has regained control of the situation in relation to maintaining documentation of inspections. No additional action was required to be in compliance.

Tanks holding cyanide solutions are inspected every day as part of the daily inspection program, using the daily inspection form. GQM had an inspection form specifically for tanks that was used until September 2021, when it was replaced by the daily inspection form. Inspections for the last 3 years were sampled and found to be complete. The daily inspection form calls for general inspection of tanks, tanks foundation, containments and leakages. However, the form does not specifically calls for inspection of structural integrity and signs of corrosion and does not identify specifically which tank is being inspected. During preparation of this report, GQM included these items in the daily inspections forms and provided examples of completed inspections to the auditors, so no additional action was required to be in compliance. GQM does not conduct non-destructive test or wall thickness evaluations in tanks and there is no preventive maintenance program in place for these type of tests. GQM needs to develop and implement a preventive maintenance program with an established periodic frequency for tanks including these integrity tests. This action is included as part of a Corrective Action Plan (CAP) for the Soledad Mountain Mine.

Secondary containments are included in daily inspection forms and calls for items related to physical integrity, impermeability, the presence of fluids and available capacity. None of the containment areas has any drains to the adjacent land surface. GQM has three Leak Collection Recovery Systems (LCRS) in the leach pad solution channel, one in the pregnant solution pump box, one on the west overflow pond and one of the east overflow pond. These LCRS are monitored on a daily basis for flow and samples for WAD Cyanide analysis are taken if daily flow pumped is more than 1 gallon. LCRS monitoring data for the last 3 years were reviewed and found to be complete. Water quality data indicate that there is cyanide detected between the liners of the east pond. GQM has a plan in place to inspect and repair the pond in 2022. Pipelines, pumps and valves in the Merrill Crowe plant and heap leach area, are inspected on a daily basis using the daily inspection form. Any deficiencies identified are corrected and verified in the following inspection. Inspection forms for the plant and heap leach facilities were verified for the inclusion of items related to deterioration and leakage of pipes, pumps and valves. The heap leach pad and overflow ponds are inspected on a daily basis for critical aspects, including available freeboard. Historical freeboard for the last 3 years at the overflow ponds were reviewed

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by the auditors and verified that the ponds were managed at all times according to the design criteria. The auditors conducted a field inspection during the site visit and verified the condition of tanks, secondary containments, pipelines, pumps, valves, water diversions, ponds freeboard and heap leach facilities. These inspections also included cyanide offloading and storage facilities.

Records of inspections, when conducted, are retained and were reviewed by the auditors. The inspections are documented and include date of the inspection, the name of the inspector and observed deficiencies. The inspection program also include cyanide offloading and storage facilities. Deficiencies identified in daily inspections are usually followed through on the next inspection until the deficiency is corrected. The auditors reviewed examples of items identified during inspections and records of the implementation of the corrective actions until they were closed. During the field audit, it was identified that some deficiencies identified in inspection forms were not consistently being followed up until closure due to a lack of a register to track all open items. Subsequent to the field audit and during preparation of this report, GQM provided evidence of a register to track deficiencies from inspections. It is the auditors' judgement that this condition has been addressed in a timely manner and does not represent a significant risk to the environment or the health and safety of the workforce. In addition, it was also observed that there is no clear traceability between the deficiencies identified in inspection forms and the work orders managed by the Maintenance department through the ManagerPlus software. During preparation of this report, GQM sent evidence that work orders were generated consistently to correct and close deficiencies identified during inspections. No further action was required to be in compliance with the Code.

GQM does not have a formal change management procedure. This was also identified in the previous certification audit in 2018. At that time, GQM presented a memorandum from the General Manager addressed to all GQM managers and process supervisors, which served as a policy statement for Change Management Review. The policy stated that upper management must review significant changes to cyanide-related processes and that the General Manager must approve the changes in writing. Further, the policy states that, prior to implementing any changes, Environmental and Safety personnel will review potential risks and regulatory compliance concerns and the Process Operations Manager will keep records of all approved changes. During the field visit the auditors verified that the Change Management Review policy is not being used, nor implemented, as there was no evidence or examples available for the last 3 years to demonstrate that the process is working, and that environmental and safety matters are taken into account to manage changes to process facilities or operating practices. During preparation of this report, GQM sent evidence of a formal Management of Change (MoC) process including a procedure, guideline and control form. The MoC process considers sign-off from the Health & Safety and Environmental areas and identifies actions to manage the proposed changes. GQM needs to show evidence of implementation of this formal MoC process and communicate it to the workforce. This action is included as part of a Corrective Action Plan (CAP) for the Soledad Mountain Mine.

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As mentioned above, GQM has not developed a complete set of procedures for the safe management of all cyanide facilities. GQM has a few procedures that describes contingency scenarios in the plant, such as the procedure to run the plant at half speed or to take a clarifier filter offline, or a decision tree to respond to contingencies related to the Merrill Crowe process flow to the leach pad. In addition, GQM has permit documents such as the Waste Discharge Requirement (WDR) or the Merrill Crowe Operating Manual, dated June 2016, that includes certain aspects on how to respond to releases, but they do not include operational steps to manage contingency scenarios related to cyanide facilities and bring the operation back to normal operational conditions. Based on the information reviewed and provided during the field visit, it is the auditors' professional opinion that GQM has not developed and implemented documented contingency procedures that meets the requirements of Code to respond to upsets in the operational water balance, deviations from design conditions, problems identified by monitoring and inspections, and to address temporary closure or cessation of the facilities. GQM needs to define the potential operational contingency scenarios related to the management of cyanide facilities, at both the Merrill Crowe and leach pad area, and develop contingency plans/procedures that define step-by-step measures to bring the facility back to normal operating conditions; and communicate them to the operators. This action is included as part of a Corrective Action Plan (CAP) for the Soledad Mountain Mine.

GQM has implemented in the last few years the ManagerPlus software to manage preventive maintenance activities throughout the mine site, that automatically generates preventive maintenance plans for a defined period of time (weekly, monthly, quarterly, others). At the time of the field visit, the auditors verified that the Manager Plus software does not include preventive maintenance programs for all cyanide facilities and that maintenance activities are corrective in nature as a result of work orders generated from inspections. As the preventive maintenance activities currently conducted for cyanide facilities are not documented, the auditors were unable to review representative maintenance records for the cyanide facilities to verify implementation. It is important to note that this Code requirement is outstanding from the previous certification audit. GQM needs to develop and implement a formal preventive maintenance program in the ManagerPlus software that addresses and documents routine maintenance of critical equipment for which a failure could result in a cyanide release or exposure. This preventive maintenance program needs to include maintenance schedules and frequencies for all cyanide facilities. The preventive maintenance program is to be used to perform necessary maintenance and inspect the integrity of process equipment, piping and tanks, according to the maintenance program and every time it is needed to keep equipment and installations working properly. During preparation of this report, GQM sent evidence of a preventive maintenance program for cyanide facilities and records of implementation since late January 2022. Considering that this item was outstanding from the previous certification audit, GQM must provide evidence of continuation of the preventive maintenance activities and send maintenance records for year 2022. This action is included as part of a Corrective Action Plan (CAP) for Soledad Mountain Mine.

GQM has one diesel-powered electric generator on site to provide backup power for the operations in the event of a commercial (primary) power outage. The generator has a capacity

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of 1275 kilowatt (KW). In the event of a power outage, this generator would run the leach pad, Merrill Crowe plant and the refinery which combined power requirement adds up to approximately 1,000 KW. The generator is turned on manually when required and there is a procedure in place that provides detailed steps on how to start it up. GQM has a contract in place with an external vendor to conduct annual preventive maintenance program of the backup generator. GQM provided examples of preventive maintenance records for the power generators for the last three years. The contractor Coastline conducted preventive maintenance until March 2020 and Cummins took over that activity starting April 2020. In addition, the generator is test run and maintained on a monthly basis. A review of these records, confirmed that the generator is checked on a monthly basis for fuel level, oil filters, air filters and are also start tested. This inspection would trigger a corrective maintenance work order if required. This preventive maintenance activity is included in the ManagerPlus maintenance software.

4.2 Introduce management and operating systems to minimize cyanide use, thereby limiting concentrations of cyanide in mill tailings.

- The operation is: in full compliance
 in substantial compliance
 not in compliance with Standard of Practice 4.2

Discuss the basis for this Finding/Deficiencies Identified:

Not applicable to GQM. This Standard of Practice solely applies to milling operations.

4.3 Implement a comprehensive water management program to protect against unintentional releases.

- The operation is: in full compliance
 in substantial compliance
 not in compliance with Standard of Practice 4.3

Discuss the basis for the Finding/Deficiencies Identified:

GQM has a process operating facility that is a closed system with zero discharge of solutions. Any precipitation falling onto the ore heap is retained within the solution management system with no discharge or runoff. In the event of a pump or power failure, the overflow pond is sized to store up to eight hours of draindown volume at the design solution application rate and a standby diesel-powered electric generator is available to provide power to the heap leach pumping operations. At the time of the site visit, GQM was unable to show evidence of the development, implementation and use of a comprehensive and probabilistic operational water balance model. The document "Water Balance for Soledad Mountain Mine", dated November

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2016, prepared by Golder, provides information related to the assumptions used to implement and run the water balance using the probabilistic simulation software Goldsim; however, GQM is not currently using the Goldsim software to operate the water balance. Instead, an Excel spreadsheet is used to run the water balance, but it does not include all the requirements of the Code to be a probabilistic model and to ensure that maximum design storage capacity is maintained at all times. The Excel spreadsheet does not include critical inputs for a water balance such as precipitation and evaporation rates; nor the design storm event for the overflow ponds (5.17" for 1,000 year/ 24-hour storm event). Subsequent to the field visit, GQM sent evidence of the implementation and use of a probabilistic water balance model in Excel, including all parameters required by the Code. GQM has been using this updated model for the first half of 2022 and is expected that it will continue being used as an operational tool to manage the water balance. No further action is required to be in compliance with the Code..

The Excel spreadsheet that GQM uses as an operating water balance assume a constant ore production rate and solution application rate for the heap leach pad at an average solution flowrate, which is 0.005 gallons per minute per square feet. The document "Water Balance for Soledad Mountain Mine", dated November 2016, prepared by Golder, includes the design storm event for the overflow ponds (5.17" for 1,000 year/ 24-hour storm event). However, this information is not included in the Excel spreadsheet as a key parameter to ensure that maximum design storage capacity is maintained at all times. Precipitation data collected from the onsite weather stations are also not included as an input in the Excel spreadsheet. There are two weather stations at GQM; however, only one of them collects precipitation data, which is the one located downwind of the GQM property. Both stations collect meteorological data such as solar radiation, wind speed, relative humidity, barometric pressure and temperature. Evaporation data is not collected. Both weather stations collect data since 2015. Precipitation recorded in 2019, 2020 and 2021 were 11.9, 6.58 and 3.88 inches respectively. The heap leach facilities at GQM have a road located upstream of the facility that acts as a diversion channel to direct any runoff generated from upgradient watersheds around the heap leach. As such, upstream precipitation is not considered as an input in the Excel spreadsheet. The effects of potential freezing and thawing conditions are considered negligible and as such are not considered in the Excel spreadsheet. The Excel spreadsheet does not include any solution losses in addition to evaporation, such as allowable seepage to the subsurface. The leach pad facilities and overflow ponds do not have an underdrain system to collect solution losses. GQM has an emergency backup power generator with enough capacity to run full operations including the leach pad, process plant and the refinery. The Excel spreadsheet does not include a power outage scenario that could put in risk the water balance of the operation, however, such scenario is very unlikely and could only occur in case both the primary source of power (public grid) and the emergency power generator were not operational.

The Waste Discharge Requirement (WDR) permit, dated April 2020, includes maximum operating levels for the overflow ponds east and west, which has been defined at 2 feet of freeboard. The ponds levels are monitored on a daily basis to maintain the water balance of the processing facilities. The auditors reviewed monitoring data for the last 3 years and verified that

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the solution volumes at the overflow ponds were managed at all times according to the design criteria.

GQM conducts daily inspections and monitoring activities to the heap leach pad and overflow ponds to ensure they are operated according to the design criteria and requirements of the Waste Discharge Requirement (WDR) permit. Inspections include valves, pumps and pipes; DE settling pond; pregnant solution pump box; LCRS; among others. Records of inspection forms for the last 3 years were reviewed and found to be complete for the Merrill Crowe plant that includes also the overflow ponds. Evidence of documented inspections for the leach pad facilities before September 2021 were not available for review by the auditors. The available capacity of the overflow pond when the divider berm between the east and west ponds is submerged is 27.1 million gallons, which includes maintaining two feet of freeboard. As-built stage/capacity values for the overflow pond specify the pond crest at elevation 2,770 feet and the 27.1 million gallon capacity at elevation 2,768 feet. Freeboard and solution volumes in the overflow ponds are monitored on a daily basis. The auditors reviewed free volume capacity data for the last 3 years and verified it was managed according to the design criteria.

As mentioned above, there are two weather stations at GQM; however, only one of them collects precipitation data, which is the one located downwind of the GQM property. The information from the weather stations is collected by the environmental area, however it is not included in the Excel spreadsheet nor used for recalibration purposes of the water balance. As mentioned above, subsequent to the field visit, GQM sent evidence of the implementation and use of a probabilistic water balance model in Excel, including all parameters required by the Code. The updated model is calibrated periodically using precipitation data collected on site.

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

- The operation is: in full compliance
 in substantial compliance
 not in compliance with Standard of Practice 4.4

Discuss the basis for the Finding/Deficiencies Identified:

WAD cyanide concentrations in all process solution at GQM exceed 50 mg/l, with free cyanide values generally ranging between 250 and 300 mg/l. Open ponds at GQM that could have process cyanide solution under normal operation circumstances include the overflow west pond, the pregnant solution pump box and the DE settling pond. In the case of the overflow west pond, GQM has implemented birdballs and perimeter fences around the pond to restrict access of wildlife. GQM has also installed grating over the pregnant solution pump box to prevent wildlife access. During the field visit, the auditors observed that the DE settling pond located next to the Merrill Crowe plant permanently has solution with values above 50 mg/l WAD cyanide with no

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controls in place to prevent access of wildlife. During preparation of this report, GQM provided photographic evidence of the installation of a cover on top of the DE pond consisting of cables at 2' spacing and mylar flagging tied on the cables at 2' intervals. It is the auditors' professional opinion that this type of cover is sufficient to prevent wildlife access considering the limited size of this pond. No further action was required to be in compliance with the Code

The east overflow pond is not designed to have cyanide solution in it and is used to store fresh water or remain empty. The pond has a perimeter fence around it. This pond could only have cyanide solution in case of an overflow from the west pond during upset conditions and as such, it does not have bird balls, netting or other avian deterrent systems. During the field visit the auditors observed that the east overflow pond had cyanide solution in it, with values above 50 mg/l WAD Cyanide, due to an operational upset condition in the plant. In the last three years, this pond have had cyanide solution for 1 day in April 2020, 10 days in October 2020, 8 days in January 2021 and for more than 90 days since October 2021 until the date of the field visit. Considering the length of time that this pond has had cyanide solution in it (more than 3 months) it is the auditors opinion that GQM needs to develop and implement a procedure for management of cyanide water in the east overflow pond including implementation of additional wildlife protection controls during upset conditions and limiting the amount of time that this pond can have solution in it. During preparation of this report, GQM sent evidence of a procedure to manage this situation, including implementation of additional controls to prevent wildlife access. The evidence also included records of communication of this new procedure to the operators. No further action is required to be in compliance with the Code.

The secondary containment of the process pipelines that run from the leach pad to the overflow ponds was free of process solution during the field audit.

WAD cyanide concentrations in all process solution at GQM exceed 50 mg/l, with free cyanide values generally ranging between 250 and 300 mg/l. As the WAD cyanide component in a sample cannot be lower than the free cyanide component, it is assumed that WAD cyanide concentrations are well above 50 mg/l. For those open ponds that have cyanide solution above 50 mg/l WAD cyanide (overflow west pond, pregnant solution pump box) GQM has implemented controls such as birdballs perimeter fences around the pond and grating over the pregnant solution pump box to prevent wildlife access.

The ponds that could have WAD cyanide concentrations above 50 mg/l under normal operating conditions have controls in place to restrict access of wildlife to open waters as described in above. In addition, the heap leach pad areas are inspected on a daily basis for ponding and wildlife mortalities. No wildlife mortalities associated to cyanide have been reported during the recertification period, which is an indication that the current controls in place are working properly.

GQM applies process solution to the ore heaps via drip irrigation systems. After stacking, a small track dozer spreads the ore to create a smooth surface and the drip emitter lines are recessed

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in small furrows to minimize surface ponding and to reduce evaporative losses. Placement of the ore on the heap via conveyor and stacker system minimizes compaction and promotes permeability. During the field audit, ponding of cyanide solution was observed on certain areas under leach on top of the leach pad. GQM conducts daily inspections to the leach pad to check for ponding areas. If ponding areas are observed, current controls include to shut off leaching in that area; however no additional action is taken to handle surface ponding, such as manual or equipment excavation to aid drainage and improve infiltration. Soon after the audit, GQM sent evidence of a procedure for management of ponding on the leach pad including installation of netting and ripping the area with a dozer, and evidence of communication of this procedure to the workers. No additional action was required to be in compliance with the Code. GQM leaching practices are conducted only with drip emitters to avoid overspray of solution due to strong winds in the area.

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

- The operation is: in full compliance
 in substantial compliance
 not in compliance with Standard of Practice 4.5

Discuss the basis for the Finding/Deficiencies Identified:

Not applicable at GQM, as it does not have direct or indirect discharges to surface water. The GQM mine operates with zero discharge of process solutions.

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

- The operation is: in full compliance
 in substantial compliance
 not in compliance with Standard of Practice 4.6

Discuss the basis for the Finding/Deficiencies Identified:

GQM has a process operating facility that is a closed system with zero discharge of solutions. Solution storage and process tanks, pumps, piping, equipment, transfer and handling systems have secondary containment, consisting of synthetic liners, concrete slabs, curbed concrete containment areas and pipe-in-pipe systems. The solution collection and containment system for the heap leach pad consists of a composite liner (i.e., a geomembrane in direct contact with a constructed soil liner). In addition to the environmental protection provided by the composite liner system, the hydraulic head on the liner is minimized via internal solution collection piping placed

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on the geomembrane and by the site grading; both designed to ensure positive drainage. The heap leach pad has an integrated leak detection system, which includes a leak detection layer and a vadose zone monitoring system. Two HDPE header pipes collect pregnant process solutions from the heap and lie within the solution channel, double-lined with geomembrane and running along the northern edge of the heap leach pad. LCRS systems are located between the two liners of the solution channel.

Solutions from the leach pad flow by gravity to the pregnant solution pump box and are then pumped to the Merrill-Crowe Plant. The pump box is a concrete structure with a geomembrane liner beneath along with a soil underliner. The overflow ponds, located adjacent to and downgradient of the pump box and Merrill-Crowe Plant, is designed to provide adequate capacity for the retention of any operational upsets and precipitation events exceeding the design storm. The overflow pond is double-lined with a composite (geomembrane and soil) secondary liner and a primary geomembrane upper liner with two dedicated leak detection system, one for each of the ponds (east and west). The Merrill-Crowe Plant, which includes the cyanide offload and storage facilities, provides concrete secondary containment for all process tanks and areas. Arrangements remain unchanged since the previous certification audit. The same leach pad configuration and controls to prevent seepage to groundwater have been implemented in the construction of leach pad Stage 3 expansion. In addition to the structural controls designed to protect groundwater, GQM implements a program for routine monitoring of the leak detection systems for the various liner systems and routine monitoring of the vadose zone and groundwater downgradient of the process facilities. The Soledad Mountain operation is located in the Fremont Valley Groundwater Basin. The beneficial uses of groundwater in the Fremont Valley Groundwater Basin, as set forth and defined in the Basin Plan and as listed in the Waste Discharge Requirements, are municipal and domestic supply, agriculture, industrial service supply and freshwater replenishment. Soledad Mountain has not experienced seepage since operation began that has caused cyanide concentrations in groundwater to rise above the protective standard.

GQM has two monitoring networks to detect any seepage from cyanide facilities; a groundwater network and a lysimeter network for the vadose zone. GQM uses a contractor (BSK Associates) to conduct groundwater monitoring in accordance with the Waste Discharge Requirements (WDR) permit. GQM currently monitors five groundwater wells (MW2, 3, 4, 5, and 6) on a quarterly basis for WAD cyanide concentrations, all of which are located downgradient of the process facilities. These wells also cover the new leach pad expansion (Stage 3). The quarterly monitoring results for the recertification period showed non-detectable WAD cyanide in groundwater, and many of the wells were found dry most of the time. GQM samples its vadose zone lysimeters on a monthly basis. The vadose monitoring system consists of eleven lysimeters: 3 around the overflow ponds and plant area, 4 for Leach pad Stages 1 and 2, and 4 more for Leach Pad stage 3 (which is monitored since November 2021). The monthly monitoring results for the recertification period showed that the lysimeter were dry most of the time, with the exception of one sample in early 2021 for lysimeter VM3 that had some traces of cyanide (0.013 mg/l WAD Cyanide). GQM suspects this is attributable to use of historical tailings on site as

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construction material below the liner system (analyses of past samples of the historical tailings indicated the presence of very low levels of cyanide).

4.7 Provide spill prevention or containment measures for process tanks and pipelines.

- The operation is: in full compliance
 in substantial compliance
 not in compliance with Standard of Practice 4.7

Discuss the basis for the Finding/Deficiencies Identified:

Spill prevention and containment measures are provided for all cyanide storage and process solution tanks. Tanks located at the process plant area (cyanide tank, barren tank and de-aeration tower, body feed and pre-coat tanks) are all within an interconnected concrete secondary containment which is in good condition and provides a large containment area. Secondary containment of the cyanide offloading area is connected with the larger secondary containment of the Merrill Crowe plant. In addition, there is a concrete tunnel that connects the secondary containment of the barren tank and de-aeration tower with the solution channel that goes from the leach pad to the overflow ponds, providing additional containment in case of a tank failure. All tanks have level sensors and visual alarm systems that can be monitored remotely from the control room. The Merrill Crowe plant area is contained within a concrete pad surrounded by curbs and walls, providing a competent barrier to seepage. The concrete floor is sloped to drain to concrete sumps, where any spills or rainwater will be pumped back to the process. The secondary containment system is inspected on a daily basis as part of the process facilities inspection program. The auditors observed that the concrete containment systems were in good condition at the time of the audit and free of any fluid.

GQM has not changed tanks or secondary containments since the initial certification audit in 2018. Therefore, the original finding is still valid that the containments can hold 110% of the single largest tank plus precipitation. All secondary containments are interconnected, including the concrete tunnel that connects the secondary containment of the process tanks with the lined solution channel that goes to the overflow ponds. All concrete floor sumps are equipped with automatic pumps to return spillage back to the process and any spills that exceed the sump capacities would flow via gravity to the overflow ponds. The overflow pond has a capacity of 27.1 million gallons, allowing for operational upsets, climatological contingencies and two feet of freeboard. The capacities of the largest process tanks, including the cyanide storage tank, barren solution tank and the de-aeration tower, are 23,500 gallons, 39,660 gallons and 20,668 gallons, respectively. The secondary containment areas are constructed of reinforced concrete. The auditors observed that the secondary containments were maintained empty and in good condition.

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All containment areas have sump pits with dedicated pumps that return collected solutions back into the process circuit. There are no discharges from secondary containments to the environment. The pumps have automatic level sensors to keep the secondary containments free of water. These sumps and pumps are inspected on a daily basis. All tanks have level sensors and alarm systems. In addition, the overflow ponds provide additional excess capacity should the secondary containments in the Merrill Crowe plant be compromised. The DE settling pond receives sludge from the clarifier filters. The pond is constructed of concrete with a geomembrane liner on top and has a pump to transfer water to the overflow pond. The level of the DE settling pond is managed visually. In case of an overflow of this pond, any water/sludge spilled will ultimately report to the overflow ponds.

Cyanide pipelines at GQM are located within a secondary containment provided for at the process plant and leach pad area, including concrete and plastic lined channels. There are no buried pipelines in the plant area, other than the pipeline that goes from the ILS system to the leach pad that has a pipe-in-pipe configuration that would drain any spilled solution back to the secondary containment of the ILS system, which ultimately reports to the overflow ponds. During the field visit, it was observed that a section of pipeline from the DE settling pond to the overflow pond is located in the border of the containment area, and in case of failure, would spill its content outside of containment. During preparation of this report, GQM sent evidence that this pipeline was relocated inside the barren tank containment area. No further action was required to be in compliance with the Code. Pipelines connecting the leach pad, and the overflow ponds are lined with HDPE through all its extension to convey any leaks to larger containment areas. In Stage 3 of the leach pad, GQM changed the cribbing of the pipes coming out the leach pad into the solution channel from wood to concrete and steel to prevent movement and/or breakage of the pipes. Cyanide pipelines in the leach pad are inspected on a daily basis as part of the routine inspections by plant personnel.

As mentioned in the initial certification audit report, there are no perennial streams or other surface water features located in close proximity to the operation. As such, no cyanide pipelines present a direct risk to surface water as there is no surface water body that requires special protection over and above the containment measures previously described. Pipelines remain unchanged and retain the same safety features identified in previous audit.

GQM uses stainless steel, carbon steel, HDPE and polyvinyl chloride ("PVC") piping materials and piping system components for conveyance of cyanide solutions and slurries. Cyanide storage and process tanks and vessels are carbon steel and concrete. These materials are compatible with cyanide and high pH solutions.

4.8 Implement quality control/quality assurance procedures to confirm that cyanide facilities are constructed according to accepted engineering standards and specifications.

The operation is: in full compliance

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- in substantial compliance
- not in compliance with Standard of Practice 4.8

Describe the basis for the Finding/Deficiencies Identified:

Quality control and quality assurance (QA/QC) programs have been implemented during the construction of cyanide facilities at GQM. The mine maintains files with QA/QC reports for the facilities constructed before the initial recertification audit in 2018 which was found in substantial compliance with the Code requirements, and has implemented QA/QC programs for new cyanide facilities built during this recertification period.

New facilities constructed since the 2018 audit include an expansion of the leach pad Stage 3, which was commissioned in Q4 2021 and includes additional leach pad areas with geomembrane, pumping and piping systems, and solution collection system. The new facility was built and tested following a quality control and quality assurance program conducted by Golder. The auditors reviewed the QA/QC documentation dated August 2021 for the subgrade preparation, soil liner fill, vadose zone monitoring, geomembrane, LCRS and solution collection system, as well as as-built drawings properly stamped and signed off by the engineer of record. The report includes a letter of a professional civil engineer registered in the State of California that prepared the QA/QC documentation for the heap leach pad, and the construction reports include a certification letter stating that the facilities were constructed in general accordance with the project's Drawings and Specifications, the approved Design Specification Clarifications implemented during construction, and California regulations. Another new facility constructed during this recertification period is the Intermediate Leach System (ILS), which was commissioned in 2021. As indicated by GQM personnel, QA/QC programs were implemented in the construction of this new facility.

GQM QA/QC programs addressed the suitability of materials and adequacy of soil compaction. The mine maintains files with the QA/QC reports for its cyanide facilities including leach pad stages 1 and 2, pregnant solution pump box, the overflow ponds, cyanide storage area and associated piping systems. The QA/QC reports for the new facilities (Stage 3) include soil compaction tests, subgrade and concrete testing, fabrication material certificates and technical specifications for HDPE drainage products, liners, piping, electrical and mechanical instrumentation. QA/QC reports also include non-destructive test logs, destructive test logs, vacuum tests, pre-weld tests, destructive sample tests, and repair controls. As mentioned in the initial certification audit report, the QA/QC program and the records reviewed and verified during the audit demonstrate that the materials are according to design specifications, the compaction has been adequate, the foundations of the tanks are suitable, geomembranes are appropriate and have been placed according to design and assembly specifications.

QA/QC records for cyanide facilities are retained by GQM. For the new cyanide facilities built since 2018 (i.e. expansion of the leach pad Stage 3), the auditors reviewed a QA/QC report dated August 2021, signed off by Golder. The auditors also verified that QA/QC records are

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retained for other cyanide facilities including leach pads (Stages 1-2). Stage 1 was constructed in 2015 and includes the leach pad, solution channel and the overflow pond. Stage 2 was constructed in 2017 and includes the leach pad and solution channel. Both QA/QC reports were developed and signed off by Golder and include a letter of a professional civil engineer registered in the State of California that prepared the QA/QC documentation for the HLF and the construction reports certifies that the facilities were constructed in general accordance with the project's Drawings and Specifications, the approved Design Specification Clarifications implemented during construction, and California regulations.

Qualified engineering companies performed the QA/QC inspections and reviews during construction of the cyanide facilities at GQM, and prepared the final construction reports and as-built drawings certifying that the facilities were constructed in accordance with the design drawings and technical specifications. The auditors reviewed records of construction reports, including as-built drawings for the new cyanide facilities (i.e. leach pad expansion Stage 3). As-built drawings were properly stamped by a qualified engineer. As mentioned in the initial certification audit report, construction of all other cyanide facilities were reviewed by reputable engineering companies.

As indicated in the initial certification audit report of 2018, GQM did not retain QA/QC records for the Merrill Crowe process plant equipment. This item was included in a Corrective Action Plan for the 2018 audit. This information was not available for review by the auditors during the current recertification audit. In addition, GQM did not retain records of the Construction Completion Certification letter from the contractor that constructed the Merrill-Crowe Plant building and associated concrete works that was shown as evidence in the initial certification audit. GQM was also unable to provide records of QA/QC program for the Intermediate Leach System (ILS), which was commissioned in 2021. In order to be in compliance with the requirements of the Code, GQM provided an alternate demonstration of QA/QC programs for the Merrill Crow plant building and equipment and for the ILS system. GQM provided a report dated March 15th, 2022 called "Soledad Mountain Project - International Cyanide Management Code Compliance Report - Merrill Crowe Area" developed by consulting firm Kappes, Cassidy & Associates and validated by Newfields that provides assurance that the continued operations within established parameters will provide protection against cyanide exposures and releases. The report presents the containment design features and describes how they provide solution containment for the Merrill Crowe plant. Additionally, the report presents the procedures and calculations for the evaluation of the expected life of the primary and secondary containment features (tank walls, piping, concrete, etc.) using applicable corrosion rates for the solutions utilized in the plant in conjunction with containment feature material properties. It is the professional opinion of the auditors that this alternative evidences presented by GQM complies with the requirements of Standard of Practice 4.8 of the Code.

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

- The operation is: in full compliance
 in substantial compliance
 not in compliance with Standard of Practice 4.9

Describe the basis for the Finding/Deficiencies Identified:

GQM has a Monitoring and Reporting program dated August 2021 that is a part of the Waste Discharge Requirements (WDR) permit. The WDR permit is reviewed every 5 years and updated as applicable, including any changes to the Monitoring and Reporting program. The Monitoring and Reporting program was developed by a consultant company (Arcadis). This program provides details related to monitoring locations for groundwater monitoring wells, lysimeters and LCRS, sampling techniques, frequency of samples and parameters to be analyzed, including cyanide species, shipment of samples, field equipment calibration, record keeping, QA/QC program, decontamination procedures, field forms, data management, laboratory program and procedures. Water sampling is conducted by a contractor called BSK Associates and samples are sent to BSK lab in Fresno, CA for analysis. Arcadis conducts data management and reporting for GQM.

Competent individuals from Arcadis have originally developed, reviewed and updated the monitoring program and procedures. The monitoring program is reviewed and updated as necessary every 5 years along with the WDR permit. Robert Ruscito, Project Manager of Arcadis, is responsible for updating the monitoring program. He has been working with Arcadis for 20 years and holds a professional geologist certifications in California and Washington and is a California certified hydrogeologist. Analytical protocols for environmental samples are provided by BSK lab in Fresno.

The GQM Monitoring and Reporting program provide details related to sampling locations, preservation techniques, chain of custody procedures, shipping instructions to BSK lab and cyanide species to be analyzed and quality assurance/quality control requirements. The monitoring program includes sampling frequencies for groundwater (quarterly), LCRS (daily) and lysimeters (monthly), the suites of parameters to be analyzed (including Total and WAD Cyanide) and maps showing monitoring locations with respect to cyanide facilities. Examples of completed chain-of-custody records for the recertification period showing proper use of the forms were reviewed.

Arcadis field data sheets for groundwater samples register in writing sampling conditions including weather, field parameters (i.e. conductivity, pH, Dissolved Oxygen, color and temperature) and groundwater levels. GQM samples the lysimeters and uses a separate field form to record sampling conditions. Completed monitoring field forms were reviewed by the auditors and verified that these conditions are being registered consistently.

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The GQM Monitoring and Reporting program that is updated every five years includes sample locations, frequencies, and cyanide species and other parameters to be analyzed. The monitoring program includes sampling frequencies for groundwater (quarterly), LCRS (daily) and lysimeters (monthly), and maps showing monitoring locations with respect to cyanide facilities. Samples are sent for analysis to BSK lab in Fresno, CA. Cyanide species (WAD and total) are analyzed on all samples. Records were available and reviewed by the auditors for all sampling and monitoring activities. The frequencies of the monitoring activities were deemed to be appropriate by the auditors.

5. DECOMMISSIONING: Protect communities and the environment from cyanide through development and implementation of decommissioning plans for cyanide facilities.

Standards of Practice

5.1 Plan and implement procedures for effective decommissioning of cyanide facilities to protect human health, wildlife, livestock, and the environment.

- The operation is: in full compliance
 in substantial compliance
 not in compliance with Standard of Practice 5.1

Describe the basis for the Finding/Deficiencies Identified:

GQM has two documents that complement each other in relation to closure activities: 1) The Financial Assurance Cost Estimate ("FACE") prepared for Soledad Mountain mine includes measures for removal of the Merrill-Crowe Plant and ancillary process equipment and support structures, including neutralization and demolition of the Cyanide Storage Tank and system components exposed to cyanide solution. The FACE, updated annually, does not include measures for closure of the cyanide facilities such as the leach pad, overflow ponds and solution channel, as those facilities are bonded separately. The FACE is submitted to Kern County and the State of California for approval and is developed by a professional consultant engineering firm (Sespe). 2) The Performance Bond for Closure (Performance Bond), which is prepared and submitted to the Lahonde Regional Water Quality Control Board (RWQCB). This report is developed annually by a third party (Golder) and provides the parameters for closure and post-closure maintenance and monitoring of the facilities regulated by the WDR permit. Specifically, the plan outlines measures for neutralization of the heap leach pads (3 Stages) and decommissioning of the pregnant solution pump box, overflow pond, pipeline solution channel, and process equipment. GQM would submit a final closure and post-closure plan (Final Closure

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Plan) to the RWQCB upon notification of closure, no later than 180 days prior to beginning any partial or final closure activities.

Both documents cover the Code requirements related to decommissioning of cyanide facilities, including decontamination (triple rinse) of equipment (tanks, pipelines, pumps, and valves), planned draindown, final decommissioning and disposal of cyanide facilities, and reclamation of facilities. There is no solid cyanide storage at GQM and, as such, it is not considered as a reclamation item in the closure documents. No water treatment needs for cyanide facilities are considered for the post closure phase.

Both documents (FACE and Performance Bond) includes closure activities related to cyanide facilities, including decontamination of equipment, demolition of facilities, neutralization of process solutions and rinsing of the leach pad, however, there is no defined implementation schedule for decommissioning activities in any of the documents. GQM needs to develop a conceptual implementation schedule for decommissioning activities for each of the closure documents. This action is included as part of a Corrective Action Plan (CAP) for the Soledad Mountain Mine.

Both closure related documents (FACE and Performance Bond) are reviewed and updated annually. The auditors reviewed evidence of the FACE and Performance Bond documents for the last three years. These documents were updated by Sespe and Golder, for the FACE and Performance Bond, respectively.

5.2 Establish a financial assurance mechanism capable of fully funding cyanide-related decommissioning activities.

- The operation is: in full compliance
 in substantial compliance
 not in compliance with Standard of Practice 5.2

Describe the basis for this Finding/Deficiencies Identified:

GQM prepares cost estimates annually for the items covered in the approved Performance Bond and submits evidence annually to the RWQCB demonstrating adequate financial assurance pursuant to the requirements of the WDR permit and in accordance with the California Surface Mining and Reclamation Act (SMARA). These cost estimates are prepared by a third party consultant (Golder) and establishes the bond amount required by the RWQCB for the facilities regulated by the WDR permit. GQM provided documentation regarding the most recent approved estimate for 2021, which is US\$3.9 MM (Million). Pursuant to SMARA, GQM retains a consultant to prepare a FACE annually. Once the FACE is approved by the lead agency, GQM must provide a financial assurance mechanism to cover reclamation costs in the event that the mine is abandoned or the operator is financially unable to complete the required reclamation activities.

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GQM provided the current approved FACE prepared for Soledad Mountain and submitted to the California Department of Conservation - Division of Mine Reclamation and Kern County for bonding purposes. The 2021 FACE cost estimate is US\$3.82MM. Both approved estimates provide the expected cost that would be incurred by a third party to perform closure and reclamation and to carry out post-closure monitoring and maintenance.

As mentioned above, GQM reviews and updates annually its closure costs for both the FACE and Performance Bond, including decommissioning costs for cyanide facilities, The most recent FACE closure cost estimate (2021) is US\$3.82 MM, which is slightly higher than the previous amount of US\$3.79 MM (2020). The most recent Performance Bond closure cost estimate (2021) is US\$3.9 MM, which is the same amount estimated for 2020.

GQM operates under two separate closure and reclamation bonds, as follows: FACE Bond posted with Kern County, the California Department of Conservation - Division of Mine Reclamation and the Bureau of Land Management; and the Performance Bond For Closure posted with RWQCB. GQM provided evidence of the Financial Assurance Mechanism for each of the bonds: For the FACE Bond, the auditors reviewed the Reclamation Performance Bond for 2020 from the Department of Conservation - Division of Mine Reclamation and Kern County dated March 30th, 2021. For the Performance Bond, the auditors reviewed a letter from RWQCB dated August 9th, 2021 for the "Acceptance of Updated Closure and Reclamation Cost Estimate for Stage 1, 2, and 3 Bonding, Soledad Mountain Project/Golden Queen Mine, Board Order No. R6V-221-0020, Kern County".

6. WORKER SAFETY: Protect workers' health and safety from exposure to cyanide.

Standards of Practice

6.1 Identify potential cyanide exposure scenarios and take measures as necessary to eliminate, reduce and control them.

- The operation is: in full compliance
 in substantial compliance
 not in compliance with Standard of Practice 6.1

Describe the basis for the Finding/Deficiencies Identified:

The scope of the recertification audit includes the following cyanide facilities: Leach pad Stages 1, 2 and 3; leach pad solution channel with Leach Collection Recovery Systems (LCRS) and pipelines, overflow ponds east and west with LCRS, pregnant solution pump box, diatomaceous earth settling pond (DE Settling Pond), solution channel and pipelines between the leach pad

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and the process plant; cyanide storage area including a liquid cyanide storage tank; the Merrill Crowe plant; and a barren tank and de-aeration tower area. There are no tailings facilities or cyanide destruction facilities at GQM.

GQM has developed several procedures for the safe operation of cyanide facilities, including cyanide offloading, and operation of the Merrill Crowe plant. The procedures reviewed include a description of the tasks to be performed and PPE requirements. Documents reviewed as part of this recertification audit included the Merrill-Crowe plant operating manual and nine procedures that were in place at the time of the audit.

The existing manual for the Merrill Crowe plant and procedures are not document controlled. The current set of procedures for the Merrill Crowe plant is not complete, as several activities in the plant that involve cyanide management have not been documented. In addition, there are no comprehensive documented procedures for management of cyanide in the leach pad. It is important to note that this Code requirement is outstanding from the previous certification audit and was included in a Corrective Action Plan (CAP) that was issued with the initial certification report. During preparation of this report, GQM sent evidence of a list of procedures required for all cyanide-related tasks (both for the Merrill Crowe and leach pad area), and written procedures developed for safe operation of cyanide facilities. Evidence of communication/training of these procedures to the operators was also provided by GQM following the site visit.

The auditors verified that operating procedures that are in place require as a minimum, the site standard personal protective equipment (PPE), including hard hat, safety glasses, and hard toed boots to prevent and/or minimize worker exposure to cyanide and/or cyanide containing solutions. Tasks where exposure to concentrated cyanide may occur, such as during cyanide deliveries, the operators are required to don additional PPE, such as chemical resistant gloves, prior to beginning the task and carry a portable radio for the duration of the unloading process.

Pre work inspections are completed at the beginning of every shift and recorded on pre-shift work area inspection form. In addition, site uses a cyanide delivery checklist, which is filled out by the operator prior to receiving each load of cyanide. The auditors reviewed records of these inspections for the cyanide related circuits for the last three years and found them to be complete.

As noted above, the procedures available on site do not cover all aspects of the process operation and maintenance to help ensure safe operation of the site. The updated procedures developed and communicated to the operators ensured that each procedure addressed the necessary PPE required for each task, including any specialty PPE beyond the site standard equipment. Procedures dealing with cyanide operations now include pre-task inspections to verify that emergency equipment, such as eye wash stations, safety showers, HCN detectors, and oxygen kits are in place and functioning that proper energy isolation has taken place prior beginning work.

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GQM solicits input from the workers when developing and evaluating the procedures. This is also accomplished through review of the procedures during safety meetings and during area or task training. Operators can communicate directly with supervisors regarding effectiveness and opportunities for improvement for the training and procedures. Operators conduct pre-task and job hazard analyses with the "SLAM" program, which also provides an opportunity for feedback regarding procedures. Changes to procedures are communicated during safety meetings and additional training is conducted, if required.

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

- The operation is: in full compliance
 in substantial compliance
 not in compliance with Standard of Practice 6.2

Describe the basis for the Finding/Deficiencies Identified:

GQM has determined pH levels for cyanide solutions as part of their operating philosophy to limit the generation of HCN gas. The pH in the barren solution is typically maintained above 10.5, and the pregnant solution returning from the pad ranges from 10 to 10.5. The operation adds cement to provide both alkalinity for pH control in the leach pad operations, as well as to aid in particle agglomeration, helping to ensure that leach pad permeability is maintained. If the pH falls below target, caustic can also be added to either the process pond or the event pond to increase the pH of the solution before it is pumped to the Merrill-Crowe plant. The auditors reviewed operator logs for the recertification period and found that pH was consistently maintained at levels where HCN gas evolution would be limited. While pH control was demonstrated through the operator logs and personnel interviews regarding the facility operation, a formal written procedure for pH management was not provided during the field audit; however, a procedure for pH analysis and adjustment was developed following the field investigation that includes PPE requirements, sample frequency, and the required actions to increase pH if it is found to be below 9.8.

GQM receives liquid sodium cyanide from Cyanco, and therefore, does not mix on site. The cyanide is received as a 30% solution with a pH of approximately 12. The cyanide is added to the barren solution or into the ILS system, increasing the pH of the respective process solutions.

GQM has identified areas where workers may be in risk of exposure to HCN gas. Fixed HCN gas monitors are installed in the Cyanide unloading and storage area, the Merrill-Crowe plant, and the refinery. Workers are not required to wear personal HCN monitors for normal daily operations. HCN alarms are set to generate an audible and visual alarm for operators at 3 ppm HCN. The alarm triggers on a high level, alerting personnel of possible high HCN gas in the area.

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No written procedure was provided to demonstrate the current operational practices. The operating manual indicates that HCN alarms will trigger at 5 ppm (strobe) and 10 ppm (strobe and audible). While the alarm point is not specified in ERSCP Attachment 4 – HCN Response Plan – HCN Gas Release, the HCN detectors were verified to have an alarm setpoint of 3 ppm. Interviews with operators confirmed that when the detector alarms, per the procedure, personnel leave the area and notify a supervisor to investigate. The supervisor then determines the next course of action, which may include verifying the HCN level with the portable detector and seeking to determine the cause of the high level or initiating the “Mayday” procedure if the event is believed to be significant in nature.

The sensor modules were reported to be replaced according to the manufacturer’s recommendation. Maintenance personnel provided examples of purchase orders issued in November and December 2021 for new sensors and factory calibration. However, no purchase orders were provided for 2019 or 2020, and no verification could be provided by maintenance personnel ahead of report submittal to confirm that the sensor modules were replaced according to the schedule. In the absence of evidence to support the replacement and calibration, providing calibration records to show that calibration has occurred and that records are being retained will be added to the CAP. Records for calibration and bump tests for the portable detectors were also not provided to the auditors and evidence that bump tests are performed according to the manufacturer’s recommendations will be required under the CAP.

Signs around the site provided various means of notification that cyanide may be present and that restrictions were in place. The cyanide unloading and storage area included danger and warning signs for cyanide, as well as the National Fire Protection Association (NFPA) safety diamond for cyanide. Warning signs were also placed throughout the Merrill-Crowe plant, including at the entrances. Signs also existed noting that eating, drinking, and smoking were not allowed. Signs indicating that open flames were not allowed were not present in the cyanide areas. The auditors requested updates to facility signage to reflect that open flames are also not allowed. Following the field investigation, GQM personnel provided evidence that the new signs had been placed throughout the cyanide facilities.

High strength cyanide solution is dyed in red color for clear identification. GQM has used sodium cyanide from Cyanco since startup. Cyanco dyes the liquid sodium cyanide at the Winnemucca, Nevada production facility prior to shipping the high strength (30%) cyanide solution turn into a red colored solution. Cyanco provided a letter to GQM in 2018 indicating that as certified signatories to the Cyanide Code, all cyanide deliveries would have red dye added, beginning in April 2018. All deliveries since that time have been dyed.

GQM has installed showers, eye wash stations, and fire extinguishers at strategic locations throughout the operation in areas where there is a potential for exposure to cyanide. Showers and eye wash stations are inspected and tested every shift and prior to beginning a task that has the potential for cyanide exposure, such as cyanide delivery. The auditors randomly checked

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showers and eyewashes during the site tour to verify functionality. Fire extinguishers are inspected monthly and serviced annually.

The operation has identified all tanks and pipes that contain cyanide solution to alert workers of their contents. Pipes containing cyanide are marked as containing cyanide solution and flow direction is indicated. Cyanide storage and process tanks are marked as containing cyanide. Verification was by visual inspection. The auditors followed the cyanide solution circuit from the cyanide storage area to the barren and intermediate leach solution circuits where cyanide is used.

GQM has available Safety Data Sheets (SDS) and first aids procedures in all areas where cyanide is managed. Electronic safety data sheets (SDS) are accessible to all staff from computers located throughout the facility. Hard copies of the SDS are also available to employees at the Merrill-Crowe plant. Employees receive training on the use and interpretation of SDS, in accordance with Mine Safety and Health Administration (MSHA) requirements for hazard training.

GQM documents incident investigations and property damage reports according to the form established for the site. The incident reporting and investigation is intended to determine the basic causes of the incident, provide remedial action and medical attention and ensure that a similar incident does not reoccur.

Incidents, injuries, occurrences of property damage, and near misses are investigated and recorded on the investigation report. Reporting is required immediately on occurrence to a supervisor who is then required to provide the preliminary report by the end of the shift, if not sooner. The incident report is submitted, and appropriate personnel are notified, which may include safety, human resources, or the department manager. The incidents are routinely assessed further, and the findings are shared at crew safety meetings.

No cyanide related emergencies occurred during this recertification period required the implementation of the emergency response procedures. The investigation procedures were implemented, as required, for non-cyanide related events, such as property damage incidents. The auditors reviewed several non-cyanide related incidents, but found no cyanide related emergencies.

Two small, non-reportable spills of process solution occurred during the recertification period. Those incidents were non-emergency events and as such were documented on the site environmental spill report. A review of the actions taken and subsequent reporting demonstrated that the operation was following the procedure.

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6.3 Develop and implement emergency response plans and procedures to respond to worker exposure to cyanide.

- The operation is: in full compliance
 in substantial compliance
 not in compliance with Standard of Practice 6.3

Summarize the basis for this Finding/Deficiencies Identified:

GQM has made available oxygen, resuscitators, radios, telephones, and alarms in critical areas. First aid kits are located in the following areas: admin building, Merrill-Crowe offices, crusher, lab, guard shack, mine operations, and within the truck shop. Three (3) cyanide antidote kits (Cyanokits) for cyanide specific treatment are located at the guard shack. Site personnel are not authorized to administer the antidote. As such, the procedure requires that an antidote kit be brought to the scene of a cyanide emergency and passed onto the outside response agency transporting the victim. The site oxygen kits include medical grade oxygen with a non-rebreather mask.

Resuscitation equipment is located at the guard shack and includes a one-way pocket mask and gloves. The site also has additional equipment, such as automated external defibrillators (AED's), self-rescue escape packs, and trauma kits are also available.

The site does not have a dedicated emergency response team. Any cyanide related emergencies would require activation of the local 9-1-1 system to seek aid from outside responders.

Operators are required to carry a radio while performing their tasks when working alone or performing high-risk work, such as during cyanide offloading. The alarm systems for all the HCN monitors provide both audible and visual alarms. The plant does not have a dedicated process control room. As such, the HCN monitors do not report back to the process control system. Safety showers do not include alarms tied to a flow switch to indicate that they have been triggered.

GQM's procedure requires inspection of the cyanide first aid equipment monthly. Cyanide kits are stored as directed by their manufacturer and replaced on a schedule to ensure that they will be effective when needed and can be readily available for an emergency. The mine has monthly formal checklists for the first aid equipment in areas where cyanide is used, to ensure it is available and in working condition, if needed. The checklist includes the inspection of cyanide antidote kits (storage requirements and expiration dates), oxygen, non-rebreather mask, and the AED, among others. Cyanide first aid equipment, including oxygen, is inspected monthly. The auditors verified the antidote expiration dates in the guard shack. All antidote kits were within expiration date. Inspections are being documented on the monthly inspection tags and the checklists.

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GQM has a site wide Risk Management Plan (RMP). Two other components of the RMP are the Cyanide Management Plan (CMP) and the Emergency Response and Spill Contingency Plan (ERSCP). The documents include communication roles and responsibilities, evacuation procedures, required notifications, reporting procedures, incident categories and risk assessment. Sections within the RMP and ERSCP specifically address emergency response procedures related to cyanide releases and cyanide exposures, and the CMP addresses all aspects of cyanide management, including cyanide related emergencies.

The documents have been developed for multiple scenarios including transportation incidents, releases during unloading, releases during fires and explosions, pipe, valve and tank ruptures, overtopping of ponds, power outages and pump failures, uncontrolled seepage, and failure of the leach pad.

The various plans outline steps and measures to be undertaken in the event of a heap leach, emergency condition. They detail the actions and measures assigned to individuals/organizations that are responsible for responding to an emergency. These include emergency communication procedures both internal and external communications with the public and government agencies.

GQM does not have an onsite emergency response team. In the event of a cyanide related emergency, GQM would activate the local 9-1-1 system to obtain support from external responders. Site personnel are trained in basic personnel decontamination through the use of the area eyewash stations and safety showers to flush or rinse cyanide for exposures to liquid sodium cyanide or process solutions. Employees are also trained in oxygen administration and could begin providing aid until local emergency services respond. Employees trained in basic first aid could also render assistance as appropriate. Multiple outside agencies are available within the area of the mine to provide emergency response assistance. Contact information for agencies who would be requested outside of the local 9-1-1 system are included in the ERSCP.

In the event of a cyanide incident where a victim requires medical attention, site personnel will follow the guidelines set out in the RMP, ERSCP, and CMP. With limited onsite response capabilities, the primary source of emergency response will be through outside agencies. Incident command or EMS personnel will determine if additional resources are required, such as air ambulance. The primary location for offsite transport would be Antelope Valley Hospital in Lancaster, California, located approximately 20 miles south of the site. Local ground or air ambulance, in coordination with the local hospitals and dispatch services, would determine if diversion to another facility, such as Tehachapi Hospital or Loma Linda Hospital would be required.

The Cyanokits must be administered intravenously (IV). As the site personnel are not authorized for IV administration, the Cyanokits are transported with the patient and transferred to local

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emergency response personnel (ambulance). The transporting agency would be given a Cyanokit to administer enroute to the local hospital.

No formal written agreements are in place for the treatment or transport of cyanide exposure victims. However, GQM maintains regular communication with external response agencies, including the local medical facilities, such as Antelope Valley Hospital, regarding the potential need for treatment of cyanide related incidents. When the ERSCP is updated, the site practice is to provide an updated copy to each external responder and retain a copy of the signed cover page for record of distribution. A letter to Antelope Valley Hospital confirming the facility as the primary care hospital has also been prepared and distributed to the facility with an acknowledgement of receipt provided to the auditors. Letters of invitation to participate in cyanide specific training in 2021 were sent to all area agencies with participants from multiple groups in attendance.

With trained personnel for fire, HAZMAT, medical and technical rescue available throughout the external response agencies, GQM is confident that responding personnel to a cyanide related emergency are capable of managing the emergency. Likewise, as the preferred medical, Antelope Valley Hospital has capable personnel to treat patients in the event of a cyanide related exposure. In addition to the Cyanokit that would be transported, and possibly administered enroute, correspondence with the pharmacy manager for AVH confirmed that the hospital also stocks a sodium nitrite and sodium thiosulfate cyanide antidote kit for treatment of patients with suspected cyanide poisoning from other sources, such as fire.

7. EMERGENCY RESPONSE: Protect communities and the environment through the development of emergency response strategies and capabilities.

Standards of Practice

7.1 Prepare detailed emergency response plans for potential cyanide releases.

- The operation is: in full compliance
 in substantial compliance
 not in compliance with Standard of Practice 7.1

Describe the basis for the Finding/Deficiencies Identified:

GQM has developed several plans and procedures that address potential accidental releases of cyanide. The RMP, ERSCP, and CMP each contain elements which describes specific response actions related to cyanide releases. The primary document related to emergency response is the ERSCP. It establishes measures in the case of cyanide gas release or spills of cyanide solution or solid cyanide. The documents include communication roles and responsibilities,

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evacuation procedures, required notifications, reporting procedures, incident categories and risk assessment. Sections within the Plans specifically address emergency response procedures related to cyanide releases and cyanide exposures. The various plans set out emergency response procedures for the mine site, including cyanide releases. Procedures for initial response, first aid and spill response, and reporting are provided in the plans.

The plans referenced above consider different scenarios appropriate to the site-specific circumstances and includes procedures to respond to emergency incidents including cyanide releases. The specific incident types presented under this Standard, including transportation accidents, power outages, failure of cyanide destruction systems, etc. are all addressed by the plans.

The ERSCP and its attachments describe the steps to be put into effect immediately for emergency scenarios such as potential failure or catastrophic release of sodium cyanide or HCN from storage or process facilities, transportation incidents, releases during unloading, and releases during fires and explosions. Emergencies regarding pipe, valve, and tank ruptures, overtopping of ponds, power outages and pump failures, and uncontrolled seepage are also addressed in the various plan documents.

Under the agreement between GQM and Cyanco as the supplier, Cyanco and TransWood (as transporter) are responsible for shipping of cyanide to site. This responsibility extends to consideration of transport routes, storage and packaging of sodium cyanide solution, the condition of transport vehicles and response in the event of an emergency or release during transport.

In the event of a cyanide emergency or incident within the mine property, GQM would respond to it according to the ERSCP. The sodium cyanide shipments during offsite transportation from the manufacturer to GQM is regulated by the U.S. Department of Transportation rules and regulations for the transport of hazardous materials. It is the responsibility of the supplier and transporter to comply with such requirements until the sodium cyanide arrives at and is accepted by GQM and the transfer hose has been disconnected from GQM's pipeline. Should an incident occur during offsite transportation activities to the sites, response will generally fall upon the transporter and supplier; however, depending on the proximity to the site, aid from the site may be requested to aid in containing the spill to minimize spread and ensure unauthorized persons do not enter the area until responders arrive on scene. Site may also be requested to relay information regarding the status of the trailer, incident location, availability of local assistance, and any imminent threats to health or the environment to Cyanco and local responders.

GQM's ERSCP describes detailed response actions to cyanide incidents. The plans describe specific response actions to be undertaken in an emergency. In the event of an emergency involving cyanide release, the RMP, ERSCP, and CMP provide for specific actions to be undertaken in the event of a release scenario.

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The site plans detail responses specific to cyanide spills or leaks including process solution and reagent spills and makes provision for initial response, first aid, spill reporting contacts and spill control and cleanup within the capabilities of the site personnel. The location of cyanide emergency equipment such as oxygen kits, AEDs, and other first aid equipment, including the Cyanokits are also provided. Process employees who work around cyanide are trained to recognize symptoms of cyanide exposure and assist with preliminary decontamination with safety showers and provide oxygen if needed. The ERSCP provides the management team who would oversee a site emergency with rapid access to key information necessary to address a variety of potential emergency scenarios, including cyanide related incidents.

The ERSCP also provides for specific roles and responsibilities, resources to be allocated, lines of communication, and actions to be undertaken in the event of an emergency situations which include scenarios such as overtopping of ponds, uncontrolled seepage, and earthquakes or other severe weather.

Any potential emergency that has the potential to affect a community will trigger the notification requirements outlined in the plan. The appropriate designated team member will notify all necessary parties, as required. Assigned personnel will contact emergency services, if necessary, and external responders, such as the California Highway Patrol, Kern County Sherriff and the Kern County Fire Department will aid in informing potentially affected communities and parties. A detailed list of contact information for relevant parties is contained within the ERSCP.

7.2 Involve site personnel and stakeholders in the planning process.

- The operation is: in full compliance
 in substantial compliance
 not in compliance with Standard of Practice 7.2

Describe the basis for the Finding/Deficiencies Identified:

GQM involves its workforce in cyanide emergency response planning. During training, and after emergency mock drills, the workforce has opportunity to provide feedback. Since all employees who work around cyanide are also trained in basic cyanide emergency response, those employees also have the opportunity to provide input in the process.

GQM includes external responders in planning to a limited extent. The mine maintains periodic communication with community emergency response stakeholders through soliciting participation in periodic training with local response agencies. Further, GQM distributes updated copies of the ERSCP to responders periodically or as updates occur. The site coordinates with Antelope Valley Hospital but they are not necessarily involved in ERSCP planning; however, the role of each of the outside agencies that may be involved in an emergency are indicated in the ERSCP, as is the party responsible for requesting outside assistance. There is no formal mutual

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aid agreement in place with the external providers to provide outside assistance to the site; however, as part of the local 9-1-1 system, the agencies would respond if called.

The auditors verified that GQM maintains sufficient resources, infrastructure, and equipment to provide initial treatment for patients exposed to cyanide until local agencies arrive for additional treatment and transfer to offsite medical facilities. It is expected that any victim will be treated for cyanide on-site and transferred as quickly as possible to ground ambulance or air ambulance for transport to AVH or one of the other area hospitals, as required, to provide additional medical care. Following the field investigation, GQM received confirmation from AVH that, while they do not stock Cyanokits, the pharmacy does maintain a sodium nitrite and sodium thiosulfate cyanide antidote kit that could be administered to a patient transported for cyanide exposure.

GQM has made potentially affected communities aware of the nature of their risks associated with accidental cyanide releases. The site is approximately 5 miles south of Mojave in Kern County, California.

GQM continues to engage the local communities to ensure that the nature of the risks associated with cyanide are clearly communicated and that the members of the various agencies understand their roles in the response to a cyanided related emergency. Community supported emergency response could be provided by the organizations identified within the ERSCP.

GQM interacts with potentially affected stakeholders by maintaining regular communication with local emergency responders, the hospital, and other community partners, as well as periodically engaging local partners to participate in cyanide related training.

The ERSCP provides a list of specific functions in which outside resources may be requested to provide personnel support, equipment, and first response capabilities to deal with cyanide related releases and exposures during transportation to and within the mine facility. Site personnel regularly interact with local emergency response partners. External responders will be summoned when additional support is required to respond to an emergency, and as requested by the site personnel managing the emergency.

The ERSCP documents state that the plans are to be reviewed quarterly and updated in response to emergencies or drills to reflect any information gathered during the response. The reviews were the responsibility of the safety coordinator. No evidence of updates was provided from 2018 to 2021. Ongoing updates have been underway since April 2021, but at the time of the field audit, no formal issuance of the document had occurred. Following the field investigation, site performed additional updates to the ERSCP to address several deficiencies and discrepancies noted by the auditors. The revised version of the plan was reviewed by the auditors and deemed adequate. As part of the site's CAP, management personnel will be required to review and approve the plan. Further, site personnel will be required to demonstrate that the ongoing reviews are taking place and that the plan is reviewed and approved by management.

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7.3 Designate appropriate personnel and commit necessary equipment and resources for emergency response.

- The operation is: in full compliance
 in substantial compliance
 not in compliance with Standard of Practice 7.3

Describe the basis for the Finding/Deficiencies Identified:

The ERSCP provides primary and alternate designation of responsible parties for the management of an emergency, including the General Manager who has authority to ensure that sufficient and adequate resources are allocated to carry out the ERSCP. The General Manager's alternate is authorized to function as the acting General Manager until relieved by the site General Manager or someone higher in the chain of command. Aside from site management personnel who may have roles in emergency response, the site relies on external responders to serve as the primary emergency response teams. Contact information for the various responders, including those that would be requested through the local 9-1-1 system, are included in the ERSCP.

Site personnel receive training to recognize symptoms of cyanide exposure and provide limited response to cyanide emergencies. Cyanide refresher training is provided annually to site personnel. Training for external responders in fire, medical, HAZMAT, technical rescue, etc. is managed by each of the individual agencies.

Contact information in the ERSCP include call-out procedures and 24-hour contact information for key site personnel. The mayday procedure issues a call for resources over the radio, contacting personnel who are already onsite. The responding supervisor or incident commander will request additional resources, if required. Contact information for external resources are listed in the ERSCP. The ERSCP is distributed to each external response agency as updates are made.

The functions and responsibilities of site personnel in an emergency are detailed in the ERSCP, as are roles of outside responders, including identifying the responsible parties for coordinating requests for outside resources. Emergency response equipment lists including the locations of cyanide antidote kits are also provided in the ERSCP. The cyanide emergency response equipment is required to be checked monthly and records are retained for a minimum of 3 years. The list of emergency response equipment is included in the ERSCP.

Emergency response planning requirements have been confirmed with Antelope Valley Hospital in Lancaster by means of regular communications and letters indicating AVH as the preferred hospital for site emergencies. They are also notified of cyanide related training and have the

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opportunity to participate. In addition, Kern County EMS and Kern County Fire, among others, are part of the Emergency Response Plan and are included in communications from site confirming their roles in response.

7.4 Develop procedures for internal and external emergency notification and reporting.

- The operation is: in full compliance
 in substantial compliance
 not in compliance with Standard of Practice 7.4

Describe the basis for the Finding/Deficiencies Identified:

The ERSCP provides the communication and notification processes and procedures in the event of an emergency including request of support to outside agencies, if necessary. Among other responsibilities, the General Manager oversees all operations at the facility during an emergency and is responsible for briefing other team members and notifying corporate personnel and determining whether activation of additional resources is warranted. The General Manager or GQM Corporate personnel respond to media enquiries; the Health and Safety Coordinator advises when reporting to government agencies is required and requests mutual aid assistance if required. The Environmental Coordinator provides expertise related to emergencies which may impact the environment and is responsible for notifying the regulators when reporting is required. The ERSCP provides contact information for the relevant regulatory agencies, outside responders and medical facilities. The requirement for contacting ICMI for any significant cyanide incident is also included in the ERSCP.

The ERSCP contains procedures for communications and includes emergency response contact information. In the event of an incident, the General Manager or their delegate will contact relevant County, State, and Federal regulators who will in turn notify affected parties in local communities as necessary. Procedures for notifying outside agencies and the media are provided in the ERSCP. Contact information of potentially affected communities and the media are included.

GQM has not reported any significant cyanide related incident during this recertification period.

7.5 Incorporate remediation measures and monitoring elements into response plans and account for the additional hazards of using cyanide treatment chemicals.

- The operation is: in full compliance
 in substantial compliance
 not in compliance with Standard of Practice 7.5

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Describe the basis for the Finding/Deficiencies Identified:

ERSCP Attachment 3.0, Cyanide Leaks, Spills, & Releases covers the recovery actions for incidents of cyanide spill in soil or in waters. Conditions where neutralization may be considered are described within the plan. The plan describes the cleanup procedure to manage cyanide contaminated soils or other media. Samples are taken until acceptable levels of WAD cyanide are reached. Soils disposal after cyanide related incidents is included in the ERSCP. All contaminated debris (soils) will be disposed on the heap leach facility.

GQM uses bottled water for its mine site drinking water supply. There are no community or residential water supplies that would be at risk to potentially require an alternative water supply. Verification was by interview with environmental personnel.

ERSCP Attachment 3.0, prohibits the use of hypochlorite in conditions where the spill or treatment chemicals could reach surface waters, though hypochlorite could be used to neutralize releases at the cyanide offloading area where the spill would be unable to reach flowing bodies of water. Granular calcium hypochlorite is stored at the offload area for this purpose.

The plan does not prohibit the use of ferrous sulfate or hydrogen peroxide for treating cyanide that has been released to water or could reach surface water, but it also does not promote their use. As these chemicals are not available at site and there are no surface waters within the immediate vicinity of the operation that would reasonably be expected to be impacted through a cyanide release, no further action was required for compliance with the Code.

Attachment 3.0 of the ERSCP outlines procedures for responding to a cyanide release, as well as the cleanup methods and sampling requirements. The plan requires over excavation of the affected area beyond the impacted zone (excavate to dry material). Excavation and sampling will continue until all samples achieve the required cyanide concentration.

For process solution spills, the ERSCP requires operators to immediately stop the release of material and notify the Area Supervisor or other responsible person named in the Plan. For reporting, the time of spill or when it was discovered is noted. Samples are collected and provided to a State approved laboratory for analyses. Guidance for assessing the area of impact is provided. A spill report is then generated indicating the type and location of spill/discharge, the cause and the total area affected. Final sampling of the affected area is specified.

The Environmental Department would manage the characterization and remediation of any larger spills and is responsible for reporting spills to the regulatory agencies. The Waste Discharge Requirements (WDRs), issued by the Water Bard, determine the notification and reporting requirements when evidence of discharge is identified through the routine monitoring of the leak detection system, vadose zone lysimeters, and groundwater monitoring wells. If cyanide is detected, the site would follow the WDRs, which would require immediate notification to the California Regional Water Quality Control Board, Lahontan Region. The sampling

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frequency and conditions are indicated in the WDR, and if an event occurred, the sampling frequency could be adjusted to determine if any potential impacts to groundwater have occurred. There is no surface water present in the areas that would be impacted by a spill. Two minor releases of process solution occurred during the period. These did not threshold limits for reportable quantities of cyanide, but a review of the spill and cleanup reports indicated that site executed the procedure as required and performed cleanup according to the requirements of the plan.

7.6 Periodically evaluate response procedures and capabilities and revise them as needed.

- The operation is: in full compliance
 in substantial compliance
 not in compliance with Standard of Practice 7.6

Describe the basis for the Finding/Deficiencies Identified:

The ERSCP is required to be reviewed at least quarterly by the Safety Coordinator and revised, as required. Formal annual reviews by the site are also required, and the plan requires that an independent audit of the ERSCP take place every three years to ensure that the plan is current, and that the necessary response training is being performed. There was no evidence provided that the ERSCP was updated between 2018 and April 2021. Since April 2021, the plan has been updated, but no version control or indication of the changes between versions was evident. Following the field investigation, the site executed a formal update of the plan that was provided to the auditors and is currently undergoing management review and approval. The last required audit appears to have been performed ahead of the initial Code certification audit without an update to fulfill the three-year requirement during the recertification cycle.

The CAP will require a formal review, update, and approval of the ERSCP, followed by demonstrated continuing reviews. The plan will also have to undergo the third-party audit, as required in the ERSCP.

The ERSCP requires GQM to conduct mock drills on at least an annual basis, focusing on likely release/exposure scenarios to test the response procedure, and incorporates lessons learned from the drills into its response planning. Records of these drills are to be kept; however, there were no records provided for drills having occurred in 2019 – 2020. In May 2021, the site conducted cyanide related training for external responders.

Following the field investigation, the site performed a mock drill. The CAP will require site to continue performing mock drills at least annually, documenting the event, and retaining the records of the drill.

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The ERSCP requires that mock drills occur at least annually and that GQM assess the plans to determine adequacy and whether revisions to the plans are required, based on the outcomes of the mock drills. A review is also required following any incident which requires implementation of the plan. No review of the Plan has been done due to a cyanide-related emergency in the recertification period as there were no cyanide-related incidents. Adherence to the requirement for mock drills to be performed and updates to the ERSCP following drills or events requiring its implementation will be required under the CAP.

8. TRAINING: Train workers and emergency response personnel to manage cyanide in a safe and environmentally protective manner.

Standards of Practice

8.1 Train workers to understand the hazards associated with cyanide use.

- The operation is: in full compliance
 in substantial compliance
 not in compliance with Standard of Practice 8.1

Describe the basis for the Finding/Deficiencies Identified:

All personnel working at site undergo new-hire training, which includes general cyanide awareness for all employees, including those working outside of the process area. In addition, a Process Plant Induction is required for all personnel with process plant access (operations and maintenance personnel). This training provides a plant overview and includes environmental, health, and safety requirements for working inside the plant area, as well as cyanide risks and safe operating practices. The training covers but is not limited to locations where cyanide is present, alarm response, PPE requirements, safe handling and management guidelines, symptoms of exposure, cyanide first aid and emergency response. The new-hire training was not provided for review, but training materials for process operations and maintenance personnel, including videos provided by Cyanco, were evaluated.

The auditors verified the records of multiple workers that were interviewed during the field audit and verified that training has occurred. The auditors also reviewed other employee training records covering the recertification period.

GQM also provides cyanide refresher training separately or as part of annual MSHA refresher training. The content of this training was not available for review, but training records indicating that refresher training occurs were reviewed. General cyanide training is refreshed at least on an annual basis to employees through safety talks and classroom training. Process operations

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and maintenance personnel rely heavily on the Cyanco videos as a source of additional refresher training for personnel working in the process areas.

Training records, including refreshers and cyanide hazard training for site personnel are retained with an electronic version stored. The auditors verified the site has maintained training records for the last three years. Cyanide refresher training is documented on an MSHA form 5000-23, which is retained through employment. Training records identify the trainer, trainee, topics covered, date and sign off sheet.

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
 in substantial compliance
 not in compliance with Standard of Practice 8.2

Describe the basis for the Finding/Deficiencies Identified:

All personnel in job positions including cyanide unloading, production and maintenance, receive training on how to perform their assigned tasks. Training involves a combination of written procedures, the plant operating manual and training by other employees already having training in the area or by supervisors (hands on training). Operators are assigned to a specific circuit and work under the direction of a competent operator until they have been deemed competent to work without direct supervision. Task specific training includes operating procedures relevant for the worker area (e.g., cyanide unloading, pump operation and maintenance, etc. for process area employees).

Formal training in working procedures is given in cyanide-related tasks, including cyanide unloading, Merrill-Crowe plant operation, and maintenance and is usually provided by experienced supervisors in each area. Determination of competency is based on observations by qualified and/or experienced plant operators and/or maintenance personnel and when the employee is comfortable doing so.

During the audit, it was observed that a limited number of formal written procedures exist for the process areas. This was noted during the initial certification audit and added to the CAP at that time. Since completing the audit, the site has prepared an extensive list of new procedures to formally document the operational tasks that occur on a daily basis. Additional procedures are still being developed. Demonstrated completion of the identified procedures and documentation that employees have been trained was provided following the field visit.

As noted above, formal training materials for each job involving cyanide management are minimal, with only a limited number of procedures in place. The operation relies heavily on task

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training by experienced operators. Since the completion of the field verification audit, multiple procedures have been developed to address the gap in documented training materials. In the newly developed procedures, the training elements for each specific job are identified. The remaining procedures identified were completed, and GQM developed a means of providing formal training to the employees, including documentation verifying the trainer, the trainee, the topic covered, and the date the training was completed. The new procedures include the objective of the procedures, required PPE, decontamination requirements, risks associated with the cyanide task and the individual task specific steps.

GQM has experienced personnel in cyanide processes conducting the training to operators, which is provided directly by the area supervisors who have been in their position for several years and are supported by other experience employees. New employees, after undergoing their new-hire training, and MSHA if not already trained, largely receive hands on training related to their job function. Training is generally by supervisors who are capable of demonstrating to the employee how to safely and effectively execute their job functions. GQM managers and supervisors undergo “train the trainer” training and the site has MSHA certified trainers on staff.

Since emergency response at GQM relies on external responders, the base training for the responders is provided by their respective organizations or through the responder’s accreditation service, such as for emergency medical personnel and fire personnel. Site coordinates with the various responding agencies to provide additional training related to cyanide in the event that a cyanide related emergency occurs.

All personnel in job positions that involve the use of cyanide and cyanide management are required, prior to working with cyanide, to receive training on how to perform their assigned tasks with minimum risk to worker health and safety. After completing initial new hire training, employees that will be interacting with cyanide complete additional training related to cyanide, including the Cyanco videos, as well as specific training in the process area.

Individual training is provided for each specific cyanide related task that an operator will perform. As noted above, most of the cyanide specific task training that employees receive is hands on training by working with experienced operators and supervisors until they are comfortable performing the tasks on their own. The employees are trained documentation required for the limited number of procedures that existed, as evidenced by regular completion of required checklists for tasks such as cyanide unloading and area or pre-shift inspections.

GQM requires and provides refresher training for safe handling of cyanide, first aid for cyanide exposure, and cyanide emergency response to assure that employees continue to perform their jobs in a safe and environmentally protective manner. All site employees receive annual cyanide training as an element of their MSHA refresher training. Employees working in the process plant receive additional cyanide related training which is documented in a 5000-23 form. Training is also provided when an operational change occurs. Supervisors also provide refresher training

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on operational tasks during weekly safety meetings, which include sign in sheets for the attendees, along with the topic(s) covered.

Following new hire orientation and cyanide training, employees complete their job and task specific training. The training largely consists of on-the-job training versus classroom or written procedure-based training. Employee competency is then assessed through observation of employee performance by the supervisors and through feedback from peer trainers. No written, verbal or formal practical testing is utilized to demonstrate understanding are undertaken for task training with sign off by both the trainer and trainee. Employees must demonstrate competence in completing the task through observation by the trainer. While interviews with employees seemed to demonstrate an understanding of their job functions and how to perform them safely, documentation to demonstrate that employees have received, understood, and can perform the tasks that they have been trained on were not provided. Following the audit, GQM implemented a system that included the development of a more rigorous training plan with formal documentation that includes the trainer and trainee's names, the date, and the task or subject on which they were trained and a means of evaluating the effectiveness of the training, whether through written tests or a scored field checklist, or a combination thereof. Evidence of training provided to site personnel was reviewed by the auditors.

Training records are retained throughout employment history. MSHA training records are retained electronically on the site data server. Employees are also responsible for retaining a copy of their most recent MSHA training certificate. Training records for each employee, covering all training they receive, contain the date, subject covered and are signed by both the trainer and trainee, which may include meeting sign-in sheets. As noted above, formal documentation of an employee's demonstrated understanding of the training materials is now included in the newly implemented training system.

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

- The operation is: in full compliance
 in substantial compliance
 not in compliance with Standard of Practice 8.3

Describe the basis for the Finding/Deficiencies Identified:

All operators within the process facilities, which includes cyanide unloading, process operations, including the heap leach pad, and maintenance personnel, are provided with site-specific hazard training including cyanide awareness, hydrogen cyanide monitoring, emergency response, recognition of cyanide exposure symptoms, cyanide exposure first aid, the role and operation of rescue equipment, such as the oxygen kits, and actions to be taken in the event of a cyanide spill including sampling.

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As noted above, specific procedures for the operation to execute their daily tasks while minimizing risk to health and safety and the environment were limited. Since conclusion of the field audit, the site has developed multiple additional procedures at site to help ensure a safe operation and minimize the potential for releases or exposures. Completion of the identified procedures and demonstration of employee training occurred following the field visit, with evidence provided to the auditors for review..

The ERSCP includes the procedures to be followed if cyanide is released, as well as specific task procedures regarding HCN Detection and Evacuation. Employees are trained to evacuate the area and notify a supervisor. Site management and the safety coordinator will assess the emergency and coordinate the necessary response.

GQM does not have a site-based emergency response team. As such, the site is reliant on assistance from external responders in the event of a cyanide related emergency. The ERSCP details the procedures to be followed to respond to an emergency, including ensuring worker safety and establishing an incident command system. The plan also includes contact information for the various response agencies, including those who may be required outside of the local 9-1-1 system, such as the air ambulance.

As professional response agencies, the external responders, receive specialized training in their fields. This training may include pre-hospital emergency medicine, HAZMAT response, vehicle extrication, confined space rescue, structure and wildland firefighting, rope rescue, and other technical rescue disciplines.

The site team provides training related to cyanide for the external responders through distribution of the ERSCP so that responders understand the operation and their role in emergency response. They also provide training to the response agencies specific to cyanide. Site personnel are trained in recognition of cyanide exposure symptoms, preliminary decontamination with eyewash and safety showers, and provision of supporting measures, such as oxygen administration. Site emergency response equipment is inspected monthly to ensure that it is available and will be functional, if required.

GQM has communicated the ERSCP with the Antelope Valley Hospital and the various response agencies noted above and within the plan. Communications are held with the hospital facilities, designating AVH as the preferred hospital for site emergencies. AVH confirmed an onsite cyanide antidote kit. In addition, the mine has communicated with emergency response services from the county and State to assist, if required. In the event of a medical evacuation from site, ground response is by one of the Kern County EMS agencies and air response is coordinated and executed by Mercy Air (air ambulance).

Annual refresher training is provided as required by MSHA to employees and includes response to cyanide exposures and response to releases. Training includes recognition of cyanide

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exposure, treatment, and first aid. Mock drills are required to be conducted at least once per year and involve operations and maintenance personnel and management.

The mock drills have not consistently been executed and updates and distribution of the ERSCP to external responders to ensure that they remain up to date on the plan have not been maintained. As such, these items have been included in the CAP.

Training records as required by MSHA are retained and are stored electronically on the site data server. This also includes cyanide training records for each employee. Cyanide training and refresher records are retained and kept current with electronic copies of all training kept on file.

Training records, in the form of the signed ERSCP covers and sign-in sheets from cyanide training, are maintained by the site safety department. Training certifications are not retained by GQM personnel for external responders.

9. DIALOGUE AND DISCLOSURE: Engage in public consultation and disclosure.

Standards of Practice

9.1 Promote dialogue with stakeholders regarding cyanide management and responsibly address identified concerns.

- The operation is: in full compliance
 in substantial compliance
 not in compliance with Standard of Practice 9.1

Describe the basis for the Finding/Deficiencies Identified:

GQM continued using mechanisms to provide opportunities to stakeholders to communicate their concerns related to cyanide management, including reports, meetings, and tours to the mine site.

The public has the ability to contact GQM via phone, email (online form) requests, and through the open-door policy. Becoming a signatory to the Code and receiving initial certification served as a means of providing stakeholders with information about the site's cyanide management practices.

Public tours are hosted for local area schools, geologic groups, and the public. The site hosts an annual family day, which includes members of the communities. A Women in Mining event

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was also hosted at the site. These public events provide a means of communication, including site cyanide management practices and information on GQM's status as a Code signatory.

Permit modifications, including the permit boundary expansion for the next phase of the leach pad also provide a means of stakeholder engagement. The 2020 expansion required coordination with county and state regulators and the water board. The regulators also require annual reporting and an annual site inspection. The permitting process for the expansion required a public hearing.

There have been no cyanide related complaints or request for information in the last 3 years.

9.2 Make appropriate operational and environmental information regarding cyanide available to stakeholders.

- The operation is: in full compliance
 in substantial compliance
 not in compliance with Standard of Practice 9.2

Describe the basis for the Finding/Deficiencies Identified:

GQM utilizes the same mechanisms described above as opportunities to interact with stakeholders and provide them with information regarding cyanide management practices and procedures.

Mine tours are open to the public by invitation or special request, including schools, universities, regulators, communities, and other interested parties. As noted above, general tours are no longer in place. During such tours, mine information including cyanide management is readily made available to tour groups.

Reports are provided to regulators, as required but anything required for regulatory submittal is also available to the public. In case of occurrence, the report should include any cyanide incidents related to cyanide management and releases, should they occur. There were two minor cyanide related incidents recorded in the last 3 years, occurring on October 15, 2019, a brief upset causing a "burp" from the preg box outside of secondary containment. Approximately 50 gallons of solution spilled outside of containment. On February 7, 2020, a small amount of material in the settling pond spilled as the incoming flow exceeded the sump pump capacity. Less than 50 gallons of slurry spilled outside of containment. All reporting requirements were followed, including a determination of regulatory reporting requirements. Samples were collected by over-excavating to dry ground. Samples taken of the spill material indicated small amounts of cyanide present, while the cleanup samples were "non-detect". Reporting and cleanup procedures were still followed, even with the lack of cyanide detected.

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GQM has not experienced incidents related with cyanide transport, storage, use or disposal during the recertification period. Nevertheless, the site has maintained their ERSCP required systems up to date for any type of potential cyanide releases that could have significant adverse effects to health and environment.

GQM is required to report severe incidents involving hospitalization or fatalities to the provincial authorities. The ERSCP contains the specific reporting requirements for any release of hazardous materials resulting in potential adverse effects to the environment, to safety and health of workers or communities.

The ERSCP describes regulatory and public communications required in the event of emergency response. Among the incidents included in the Plan there are scenarios related with cyanide releases on and off the mine site.

No reportable cyanide related incidents have occurred in the last three years at the site. However, if an event were to occur, the ERSCP indicates that the reporting criteria will describe the location and the nature of the incident, as well as immediate mitigation actions taken. The plan also includes an updated list of stakeholders and contact information for required reporting.

No cyanide releases that are or that cause applicable limits for cyanide to be exceeded occurred in the last 3 years. If an event were to occur, communication to the public would be made per the ERSCP. Forms of public communications may include press releases, interviews, and regulatory reporting. Significant cyanide incidents would be reported per the requirement to ICMI.

Golden Queen Mining.
Soledad Mountain Mine


Signature of Lead Auditor

January 13th, 2022


SmartAccEss
SOCIO-ENVIRONMENTAL
CONSULTING LLC