INTERNATIONAL CYANIDE MANAGEMENT CODE
GOLD MINING OPERATION RECERTIFICATION AUDIT
NEVADA GOLD MINES – GOLDSHIKE
SUMMARY REPORT

Submitted to:

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Elko, Nevada

and

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Revision 1: August 27, 2020
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1. INTRODUCTION, SUMMARY, AND ATTESTATION

This summary report has been prepared to meet the requirements and intentions of the International Cyanide Management Institute (ICMI) to demonstrate that following named project has met the obligations in implementing the International Cyanide Management Code (Code).

Name of Project: Goldstrike Operations

Project Owner / Operator: Nevada Gold Mines

Name of Responsible Manager: Paul Wilmot, General Manager for Carlin Surface

Address and Contact Information: Nevada Gold Mines
Goldstrike Operations
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Date of Audit: This recertification audit was conducted February 4 - 6, 2020.

Auditors Findings:

☑ in full compliance with NGM Goldstrike

☐ in substantial compliance with International Cyanide Management Code

☐ not in compliance with

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

NGM Goldstrike

Name of Facility

Signature Lead Auditor

Revision 1: August 27, 2020

Date

ERM

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2. LOCATION AND DESCRIPTION OF MINING AND MILLING OPERATION

Goldstrike is located in the Little Boulder Basin adjacent to the Tuscarora Mountain Range on the county line between Elko and Eureka Counties, approximately 27 miles northwest of the community of Carlin, Nevada. Goldstrike is located on both private land and federal land administrated by the U.S. Department of Interior, Bureau of Land Management. The North Area of the Newmont Carlin Mine is adjacent to the south boundary of the Goldstrike Mine. The local environment consists of high desert and the surrounding land uses include ranching, mining, and a limited amount of irrigated agriculture. The nearest community is the community of Carlin with a population of approximately 2,300 people. Elko, some 50 miles to the southeast with a population of approximately 18,000, is the largest regional city.

As noted on the Barrick website, Goldstrike’s proven reserves as of end of 2018 were 55.5 million ounces, grading at 3.65 grams per tonne, and probable mineral reserves of 12.4 million ounces of gold, grading at 5.05 grams per tonne.

Goldstrike consists of a single large open pit mine; two underground mines; overburden stockpiles; topsoil stockpiles; two tailings impoundments; a closed and reclaimed heap leach facility; two separate grinding and milling circuits feeding a roaster and carbon-in-leach (CIL) circuit and an autoclave and CIL circuit (currently idled); administration and maintenance facilities; access and haul roads. These facilities are arranged in two general areas of operation: 1) the AA-Block area which includes the Betze-Post open pit, the Meikle and Rodeo underground mines, the Wet Mill/Autoclave and Resin in Leach (RIL) circuit, the AA-Tailings Disposal Facility, and the reclaimed AA-heap leach facility; and 2) the North-Block area.
which includes the Roaster and CIL circuit and the North-Block Tailings Disposal Facility.

Goldstrike became a signatory to the Code in 2005. The operation was initially certified in 2007 and subsequently recertified in 2010, 2014 and 2017. This audit, then, is the fifth audit cycle for this operation.

The Goldstrike operation was found to be in Full Compliance with the International Cyanide Management Code; and this operation has not experienced compliance problems during the previous three-year audit cycle.
3. SUMMARY AUDIT REPORT

PRINCIPLE 1 - PRODUCTION

Encourage responsible cyanide manufacturing by purchasing from manufacturers who operate in a safe and environmentally protective manner.

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

☑ in full compliance with

☐ in substantial compliance with Standard of Practice 1.1

☐ not in compliance with

_Basis for Audit Finding:_

Cyanco, located in Winnemucca, Nevada, has been the cyanide producer and supplier for Goldstrike for the term of the 2020 Recertification Audit – 2017 through 2019. The contract between Barrick Gold of North America (Barrick), which includes the Goldstrike operation by reference, and Cyanco was signed in May 2008 and became effective January 1, 2009. The contract states that both parties are signatories to the Code and must maintain certification throughout the full term of the contract. Cyanco’s Winnemucca Production Plant is a Code certified operation as reported on the ICMI website: originally certified October 3, 2006, and has maintained certification through to the most recent recertification in 2019.
PRINCIPLE 2 – TRANSPORTATION

Protect communities and the environment during cyanide transport.

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

☐ in full compliance with

☐ in substantial compliance with Standard of Practice 2.1

☐ not in compliance with

Basis for Audit Finding:

Cyanco’s production facility was certified as compliant by the IMCI on October 11, 2006, and has maintained certification through to its most recent recertification in 2019. Cyanco notified customers of the addition of red dye to liquid cyanide, starting April 15, 2018.

Cyanco uses TransWood as the only transporter of cyanide from their production operation to Goldstrike. TransWood is a signatory to the Code and Code certified TransWood was originally certified in October 11, 2006, has maintained certification through to 2019 and is considered a fully certified transporter.

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

☐ in full compliance with

☐ in substantial compliance with Standard of Practice 2.2

☐ not in compliance with

Basis for Audit Finding:

The cyanide supply contract with Cyanco requires Cyanco to comply with the "Principles and Standards of Practice" of the International Cyanide Management Code during the manufacture, transportation, storage, use and disposal of Product (cyanide). Compliance with the Code requires that the supplier and transporter to conform to specific compliance matters set out in the Code's Cyanide Production and Cyanide Transportation Verification Protocols. These Verification Protocols specifically address packing, labeling, storage, transportation routes, unloading and other requirements transportation requirements.

The Nevada Gold Mines (NGM) (Goldstrike)-Cyanco contract requires that Cyanco, the Seller, to ensure there are written agreement(s) with Subcontractor(s) that clearly designate specific responsibilities for safety, security, release prevention, training and emergency response in transporting and handling cyanide.
between Goldstrike and Cyanco.

The cyanide supply contract between NGM and Cyanco specifies that NGM takes ownership of the product at the time the liquid cyanide is delivered into the cyanide storage tank at the mine site. Goldstrike has Bills of Lading showing that Cyanco and TransWood are the sole suppliers and transporters of the cyanide.

PRINCIPLE 3 - HANDLING AND STORAGE

Protect workers and the environment during cyanide handling and storage.

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

- in full compliance with
- in substantial compliance with **Standard of Practice 3.1**
- not in compliance with

**Basis for Audit Finding**

Goldstrike has designed and constructed the cyanide offloading and storage facilities in accordance with sound engineering practices and cyanide producer’s guidelines. Goldstrike receives liquid cyanide at the roaster via a single offload and outside 20,000 gallon storage tank with secondary containment. The auditors observed that the offload, storage tank, and secondary containment were in good condition.

The process areas are within the fenced complex of the Goldstrike Roaster Complex. Goldstrike maintains gates, site security personnel and video surveillance that monitor the site to prevent unauthorized access. There are no unsecure valves outside secure areas that would allow access to liquid cyanide.

The design and construction of these offloading and storage facilities have not changed since previous audits (other than the decommissioning the outside tank at the autoclave/wet mill). Therefore the findings regarding design and construction from the previous audit cycle are still valid. Given that the offload and storage facility at the autoclave/wet mill were out of service during the current audit cycle, the auditors focused on the active offload and storage facility at the roaster.

The offload and storage area at the roaster are located outside, away from surface water and places were staff may congregate. However, the offload is located in a traffic-way/walk-way between several buildings. For this reason, Goldstrike temporarily places cones around the offload ramp during an offload, according to a written procedure, and has placed signage on building doors in the vicinity advising...
operators to check for an offloading in progress before exiting the doors.

Liquid cyanide is unloaded at the roaster on a curbed and sloped concrete ramp at the roaster. A wall cutout would drain leakage from the offload ramp to a sump for the distribution pumps immediately inside the adjacent building. These measures prevent seepage to the subsurface and allow for recovery of leaked solution. Goldstrike has not changed the ramp since previous audit cycle and the auditors observed the ramp to be in good condition.

Goldstrike has installed two level sensors on the storage tank at the roaster offload to prevent tank overflows. An automatic level sensor has a readout at the offload ramp as well as at the roaster control room panel. A second dial gauge is located on the outside of the tank itself. The auditors confirmed that both were functioning and reading approximately the same value. A review of monthly work order history indicated that the cyanide tank level indicator and high level strobe/horn are inspected monthly as part of the preventative maintenance program.

The cyanide storage tank at the roaster was installed on a concrete base within concrete secondary containment consisting of chest-high concrete walls and a concrete floor. These measures prevent seepage to the subsurface and constitute a competent barrier to leakage. Goldstrike has not changed the facility since the previous audit cycle and the auditors observed the concrete to be in good condition.

Goldstrike stores liquid cyanide in the storage tank at the roaster in the open air that provides adequate ventilation against the build-up of HCN gas. This tank has a closed top and rests on a concrete base that minimize the potential for contact of reagent-grade liquid cyanide with water. Access to the secondary containment for the storage tank is limited via the adjacent building with valves properly locked out to prevent inadvertent operation. The tank is located in its own secondary containment that is separate from incompatible materials, such as acids, strong oxidisers and explosives and apart from foods, animal feeds, and tobacco products.

**Standard of Practice 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.

☑ in full compliance with

☐ in substantial compliance with Standard of Practice 3.2

☐ not in compliance with

**Basis for Audit Finding:**

Both Goldstrike and Cyanco have developed written procedures to prevent exposures and releases during offloading of liquid cyanide from the tanker truck. The procedures describe the operation of valves and couplings for unloading liquid cyanide. The procedures specify personal protective equipment consisting of chemical resistant suit (pants, coat), chemical resistant gloves and boots, goggles, face shield, and radio. The Goldstrike procedure requires an observer during making and breaking connections, as well as observation from the control room via video camera. Prior to starting an offload, the driver and observer
check the tank level with the control room to confirm that the tank level is less than 60 percent. Cones are placed to restrict access in the “red zone”, a 25-foot diameter area around the rear of the tanker truck. The starting and ending tank levels are noted on the Cyanco Bills of Lading. The auditors reviewed the procedure, bills of lading, and observed an offload to verify compliance.

Goldstrike receives liquid cyanide in tanker trucks; therefore, there are no empty containers to be managed. Similarly, there are no full containers that might rupture during handling or risks from stacking the containers. Clean-up of spills during mixing is not an issue because the liquid cyanide does not require mixing. If spill clean-up was needed during offloading, however, the driver would hose down the offload ramp to the adjacent sump via the wall cutout.

**PRINCIPLE 4 – OPERATIONS**

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

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

- [ ] in full compliance with
- [ ] in substantial compliance with
- [x] not in compliance with

**Basis for Audit Finding:**

Goldstrike has developed management and operating systems for the cyanide facilities at the site. The cyanide facilities for this audit cycle were:

- North Block Area
- Roaster cyanide offload and storage tank
- Roaster CIL circuit
- Roaster INCO/SO2 destruct circuit
- North Block Tailings Storage Facility (NBTSF)
- NBTSF seepage pond
- Paste plant INCO/SO2 destruct plant
- Paste plant
- Meikle underground mine with paste backfill
• Pipelines to and from the NBTSF
• Cole’s Crater Pond (aka Roaster Containment Pond, an emergency catch pond along the tailings and reclaim pipeline route)
• AA-Block Area
• Strip circuit (low concentration cyanide solution; no new cyanide is added at the strip circuit)

The autoclave/wet mill was converted to a resin-in-leach (RIL) that does not use cyanide. Goldstrike constructed the non-cyanide Tailings Storage Facility 3 (TSF3) to ensure that tailings decant return flow to the autoclave/wet mill would be cyanide free. The Valdez Pond associated with the autoclave/wet mill also no longer receives any solution with cyanide.

Modifications to the NBTSF this audit cycle included the construction of 10B and 11B raises; and a booster pump station upgrade in 2018.

Goldstrike has obtained Water Pollution Control Permits (WPCP) from the Nevada Division of Environmental Protection (NDEP) that identify the assumptions, parameters, and regulatory requirements for all facilities at the mine, and identify the assumptions, parameters, and regulatory requirements for all facilities at the mine (e.g., TSF freeboard, WAD Cyanide concentrations in discharges to the TSF, and wildlife monitoring and reporting). One permit applies to the roaster, CIL, paste plant, and NBTSF (WPCP #NEV0091029) and another permit applies to the autoclave/RIL (WPCP #NEV0090060). The NDEP permit program requires that any change to the facilities be approved in advance. The operation, maintenance, and surveillance manual for the NBTSF also contains assumptions, parameters, and regulatory requirements.

Goldstrike has developed procedures for safe operation of the cyanide facilities at the roaster, paste plant, cyanide destruct circuits, NBTSF, and other associated facilities. These procedures describe hazards, controls, pre-operational inspections where applicable, maintenance where applicable, personal protective equipment, and task activities.

Goldstrike has developed a procedure called “Management of Change” (MOC) that describes the procedures to be followed to manage change and control the potential to adversely affect the adequacy of procedures, emergency response plans, and operating plans.

Goldstrike has developed contingency procedures for abnormal operating conditions and temporary cessation and closure. The operating plans include contingency measures for fluid management, spills, leaks, overtopping, seasonal closure, and temporary closure. The Operation, Maintenance, and Surveillance (OMS) Manual for the NBTSF describes contingency measures for blockage of drainage pipework; flows within the sloping, toe, or foundation blanket drain; leakage from seepage collection sump; leakage from seepage collection pond; and leakage from tailings distribution pipeline. This manual also describes temporary cessation of operations for power outages, earthquakes, extreme rainfall, extreme low temperature, and operational shutdown.

Goldstrike inspects their cyanide facilities on a shift, batch, daily, monthly, annual, and random frequency depending on the type of inspection. This program is adequate to assure that cyanide...
facilities are functioning properly. The inspection forms include the name of the inspector, date of the inspection, and a comments section for noting deficiencies and conditions. Corrective actions are tracked on the forms or in databases (Oracle and Cintellate). The auditors reviewed completed examples of inspection records from throughout the recertification period to verify compliance.

Goldstrike visually inspects tanks, columns, vessels, pumps, pipelines, valves and other appurtenances for corrosion, leakage, cyanide salts, and general condition during the regular inspections. In addition, Goldstrike conducts annual non-destructive testing (NDT) on the cyanide storage tank at the roaster. Other vessels are subject to NDT and internal visual inspection at varying frequencies. Secondary containments are inspected on a shift or daily basis. Leak detection and collection systems at the NBTSF and ponds as required by their Water Pollution Control Permits with results reported in the required quarterly reports. Goldstrike inspects the NBTSF, the associated seepage pond, and the Cole’s Crater Pond on a daily basis for available freeboard. The Engineer of Record inspects the dam annually with reports submitted to the Nevada Division of Water Resources. There are no diversions for the NBTSF.

Goldstrike has implemented a maintenance program that ensures cyanide equipment and devices function properly. The program includes proactive (regularly scheduled for prevention) and reactive maintenance (scheduled based on inspections). Maintenance is managed with the Oracle database. Cyanide-related maintenance is prioritized immediately or within 7 days. Goldstrike also calibrates HCN monitors and pH sensors on a monthly and weekly schedule, respectively. The auditors reviewed examples of completed work orders, maintenance histories, and calibration records from throughout the recertification period to verify compliance.

Goldstrike has backup generators to prevent unintentional releases and exposures during power outages at the roaster, the paste plant, and the NBTSF seepage pond. Backup generators are not installed at the decant return pumps at the NBTSF because in the event of a power outage all inflows would stop. The pit maintenance crew maintains all generators at the mine. The auditors observed these generators to visually be in good condition and reviewed maintenance histories from throughout the recertification period to verify compliance.

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

- ☒ in full compliance with
- □ in substantial compliance with  
- □ not in compliance with  

**Basis for Audit Finding:**

The roaster receives ore from the Betze pit, Meikle and Rodeo underground mines, and the Arturo pit. The roaster also receives high grade ore from the Chug underground mine, Pipeline NGM Goldstrike  

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Signature Lead Auditor: [Signature]  
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pit, and Chop pit at the Barrick Cortez Mine. Goldstrike blends these ores before milling, sometimes even blending single loader buckets of ore, to ensure consistent ore characteristics to the roaster and CIL. The roaster metallurgist stated that this blending strategy eliminates the need for repeated studies by ore type to optimize cyanide addition. The addition rate of approximately 0.4 to 0.6 pounds per ton at the head of the CIL circuit is known from long-standing practice to maintain the target concentration of less than 0.1 pounds per ton cyanide in the last tank of the CIL circuit prior to the slurry entering the cyanide destruct tank.

Goldstrike selected a strategy of manual sampling and analysis to adjust cyanide addition rates many years ago. This strategy is still effective according to Goldstrike metallurgists. Samples are collected from each CIL tank every 3 hours for analysis of free cyanide at the onsite laboratory. The cyanide addition rate is adjusted by the control room operators based on the sample results. The auditors reviewed a time series graph of the addition rate at the head of the circuit and examples of operator’s logs to verify compliance throughout the recertification period.

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

- [x] in full compliance with
- [ ] in substantial compliance with
- [ ] not in compliance with

**Basis for Audit Finding:**

Goldstrike has had a number of water balance models for the NBTSF over the years. The most recent version, and currently used, version was prepared by a consultant in 2014. This water balance is both comprehensive and probabilistic. The water balance is comprehensive in that it includes raises and available storage through the year 2025. The model is updated monthly with daily inputs. The model inflows include tailings deposition (solids and water), seepage return flow, underdrain return flow, precipitation, and runoff. The model outflows include reclaim water, underdrain outflow, seepage outflow, and evaporation. Storage inputs include tailings solids, entrained water, and free water. This water balance is probabilistic in that it models the 24-hour Probable Maximum Flood (PMF) of 7.75 inches. A PMF is the largest flood possible from the worst-case combination of weather and watershed conditions, and as such, obviates the need to consider other probabilistic scenarios.

Goldstrike implements the water balance as described in the Operation, Maintenance, and Surveillance (OMS) Manual for the NBTSF. This manual specifies weekly survey of the water surface elevation and quarterly bathymetric surveys, as well as other monitoring activities (inclinometers, weather, solids content, flow meters, and piezometers). Goldstrike staff issue a weekly status email showing a time series graph of the water pool elevation and flow rates. Goldstrike inspects the NBTSF daily (operators) and weekly (environmental department). The Engineer of Record inspects the dam annually with reports submitted to the Nevada Division of Water Resources. Because the TSF is completely double-lined with a seepage collection system, the water balance does not account for other losses such as seepage. There are no diversions or discharges to surface water from the TSF.
Goldstrike operates the NBTSF with 7 feet of freeboard, which is comprised of 4 feet for the PMF and 3 feet for wave run-up. Weekly reports presented time series trends of water pool elevation compared to the permitted elevation that shows the required freeboard was maintained throughout the recertification period. Additionally, Goldstrike operates the seepage pond for the NBTSF with 3 feet of freeboard and Cole’s Crater Pond (a catch pond along the tailings pipeline route) with 9 inches of freeboard.

Goldstrike measures precipitation at several stations onsite, and updates the water balance each month using daily precipitation values. The updated water balance is then available to adjust operating practices, if necessary.

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

- [x] in full compliance with
- [ ] in substantial compliance with
- [ ] not in compliance with

**Basis for Audit Finding:**

Goldstrike has implemented measures to restrict wildlife and cattle access to open waters with Weak Acid Dissociable (WAD) cyanide greater than 50 ppm. The overall approach is to reduce the number of facilities with open waters and then to limit WAD cyanide to less than 50 ppm in the remaining open waters. Pregnant and barren solutions at the roaster are managed in covered tanks rather than ponds. The cyanide destruct at the roaster limits concentrations in open water at the NBTSF, the associated seepage pond, and the catch pond along the tailings pipeline route (i.e., Cole’s Crater Pond) to less than 50 ppm WAD cyanide. Seepage from the NBTSF is managed in a concrete collection vault with limited access, which occasionally overflows to the adjacent seepage pond.

Goldstrike has installed fencing to restrict wildlife and cattle access to the cyanide facilities. The NBTSF seepage pond and the Cole’s Crater Pond are fenced with an 8-foot high combination of mesh (lower portion) and four-strand wire (upper portion) to prevent access by both small mammals and large mammals (e.g., antelope, deer). The roaster area is surrounded by 8-foot high chain-link fence. The mine property is also fenced with an 8-foot high combination mesh/four-strand fence. The auditors observed these fences to be in good condition at the time of the site visit.

Goldstrike demonstrated that the concentration of WAD cyanide in open waters did not exceed 50 ppm during the recertification period. The liquid fraction of the tailings inflow to the NBTSF showed concentrations less than 50 ppm. In the event that the tailings pipelines dump into the catch pond, the concentrations would be the same as the tailings slurry liquid fraction. The Goldstrike senior environmental engineer stated that the concentration of WAD cyanide in the NBTSF seepage pond is generally non-detect due to dilution from underdrain inflows. The auditors reviewed quarterly monitoring...
reports required by the Nevada Division of Environmental Protection from throughout the recertification period to verify compliance.

Goldstrike reported no wildlife mortalities related to process solutions during the recertification period. The auditors reviewed the quarterly mortality reports required by the Nevada Division of Wildlife to verify compliance.

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

☑️ in full compliance with

The operation is

☐ in substantial compliance with

☐ not in compliance with

**Basis for Audit Finding:**

Goldstrike operates as a zero discharge facility with no permitted direct or indirect discharges to surface water. Goldstrike samples springs and ephemeral washes in the vicinity of the mine facilities, as required by their permits. Results for Spring Water #1, Spring Water #2, Bell Creek, Rodeo Creek, and Brush Creek showed non-detect values for WAD cyanide (the permit required constituent) throughout the recertification period. There are no permitted mixing zones or surface water remedial activities at Goldstrike. The auditors reviewed the quarterly monitoring reports for the recertification period to verify compliance.

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

☑️ in full compliance with

The operation is

☐ in substantial compliance with

☐ not in compliance with

**Basis for Audit Finding:**

Goldstrike has implemented measures to protect the beneficial uses of groundwater beneath and down gradient of the operation. These measures are largely the same as the previous audit cycle, and those findings are still valid.

The Goldstrike cyanide facilities include: the NBTDF and the AA Tailings Disposal Facility. These facilities and process ponds have all been constructed with liners to prevent seepage. The AA Tailings Disposal Facility has a clay core embankment and clay liner extending underneath the impoundment
footprint. The North Block Tailings Disposal Facility is lined with a composite liner system consisting of compacted low permeability soil through stage seven overlain by a synthetic liner.

Goldstrike has demonstrated that concentrations of the appropriate cyanide species are less than a reference standard down-gradient of the cyanide facilities. The actual beneficial uses of groundwater in the region around the mine are irrigated agriculture, ranching, industrial (i.e., mining), and drinking water. However, the beneficial uses of groundwater at the mine is water supply for processing. Goldstrike uses 0.2 ppm WAD cyanide as a reference standard for groundwater based on federal drinking water standards.

Goldstrike uses part of the roaster tailings as cemented rock fill (i.e., paste backfill) in the Meikle and Rodeo underground mines. The paste plant is preceded by its own cyanide destruct plant (not the same as the cyanide destruct plant that precedes slurry pumped to the NBTSF). Cement and fly ash are added in the paste plant so that the paste hardens after placement via pipeline behind bulkheads in the underground workings. The cement and fly ash also contribute to an alkaline pH in the paste.

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

- **in full compliance with**

**The operation is**

- ☐ in substantial compliance with
- ☐ not in compliance with

**Basis for Audit Finding**

Goldstrike has provided properly sized secondary containments for all cyanide-related tanks, columns, and vessels; there are none without secondary containment. With the exception of the expansion of the CIL circuit at the roaster, the secondary containments for the other cyanide storage tanks, columns, and vessels have not changed since the previous audit cycle and the previous findings regarding configuration and sizing are still valid. The existing containments consist of concrete walls and floors with sealed joints designed for a volume of at least 110 percent of the largest vessel. The auditors observed the existing containments to be in good condition.

The secondary containment for the existing CIL circuit at the roaster was expanded to include two new columns during this audit cycle. The intermediate wall between the new and existing circuits was removed, thus making a single large containment consisting of concrete walls and floor with sealed joints. A design drawing showed that the foundations for the new CIL columns consisted of a concrete ring beam with a solid concrete slab inside the ring beam, thus providing an impermeable barrier. The secondary containment for the entire roaster CIL circuit has flow-through capability to the Cole’s Crater Pond (aka Roaster Containment Pond). The combined available volume of 461,855 cubic feet (ft³) from the secondary containment and Cole’s Crater Pond is more than enough to hold the required volume of 132,438 ft³. The auditors observed the entire containment to be in good condition.
Goldstrike has installed sumps with pumps to return cyanide solutions, slurry, and/or precipitation to the process circuits. Therefore, no written procedures are necessary to prevent discharge of solutions or slurry to the environment.

Goldstrike has provided both spill prevention and containment measures for pipelines containing cyanide solutions and tailings slurry to collect leaks and prevent releases to the environment. The tailings slurry line between the roaster, cyanide destruct circuit, and the paste plant are contained in a combination of overhead pipe trays and pipe-in-culvert under a road crossing. The tailings and reclaim lines between the roaster and the NBTSF are contained in a combination of lined channels, pipe-in-culvert under road crossings, and triple pipe-in-pipe on slopes. In addition, the Cole’s Crater Pond is a double-lined emergency catch pond with leak detection for containment of spills from these pipelines. Lines associated with the double-lined seepage collection pond with leak detection also are contained in a combination of lined channels and pipe-in-pipe configuration. The auditors observed these pipeline containment measures to be in good condition.

Goldstrike has constructed pipelines and tanks of mild steel, stainless steel, and high-density polyethylene (HDPE), all of which are compatible with cyanide and high pH conditions. They have also provided both spill prevention and containment measures for pipelines containing cyanide solutions and tailings slurry to collect leaks and prevent releases to the environment. The tailings slurry line between the roaster, cyanide destruct circuit, and the paste plant are contained in a combination of overhead pipe trays and pipe-in-culvert under a road crossing. The tailings and reclaim lines between the roaster and the NBTSF are contained in a combination of lined channels, pipe-in-culvert under road crossings, and triple pipe-in-pipe on slopes. In addition, the Cole’s Crater Pond is a double-lined emergency catch pond with leak detection for containment of spills from these pipelines. Lines associated with the double-lined seepage collection pond with leak detection also are contained in a combination of lined channels and pipe-in-pipe configuration.

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

☑ in full compliance with

☐ in substantial compliance with Standard of Practice 4.8

☐ not in compliance with

Basis for Audit Finding:

There were two modifications to cyanide facilities considered this audit cycle; the 10B raise and a booster pump at NBTDIF.

Certified as-built drawings of the 10B raise were provided with associated correspondence to State officials confirming the quality of design and construction.

The North Block Booster Station Building was constructed to house seven new pumps; a new gland seal
water tank with containment pad and shared containment with the building, and a new E-House, Genset and switchgear. Barrick Goldstrike personnel including construction supervisors and engineers inspected the project area daily to ensure compliance with the design. Concrete tests, liner inspections and daily reports indicate compliance with the design specifications and plans.

Based on the as-built condition, Hanlon Engineering & Associates certified that all installations included in this submittal were sufficient for use and did not deviate from the intent of the original design.

The QA/QC programs for the two cyanide facility modifications this audit cycle considered the suitability materials, soil compaction, concrete placement, liner installation, and other items.

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

☑️ in full compliance with

The operation is ☐ in substantial compliance with ☐ not in compliance with **Standard of Practice 4.9**

**Basis for Audit Finding**

Goldstrike has developed a sampling and analysis plan that covers water and wastewater sampling. The plan includes sections on field sampling, quality assurance/quality control, and reporting. Goldstrike uses the EQUIS database to manage sampling data. The sampling and analysis plan was developed and updated by qualified personnel, i.e., experienced Goldstrike Environmental Department employees. The contents of the plan mirror the requirements of the Water Pollution Control Permits for the site, further evidence of qualified review by regulators. The commercial laboratory contracted by Goldstrike is certified for analysis of WAD cyanide.

Regarding discharges of process water, Goldstrike is a zero-discharge operation and does not discharge cyanide solutions to the environment.

Wildlife monitoring of the cyanide facilities is conducted in accordance with the requirements of the site’s permits from the Nevada Division of Wildlife, as evidenced by quarterly reports throughout the recertification period.

Goldstrike inspects, records, and reports wildlife mortalities due to any cause, including contact with and ingestion of cyanide solutions. Goldstrike conducts thorough weekly inspections of all cyanide facilities using a form entitled “Wildlife and Process Solution Weekly Inspection”. For each area visited, the inspector must note whether the area is free of wildlife and/or wildlife mortalities. Given that concentrations of WAD cyanide in the few open waters at Goldstrike are low, the auditors judge that weekly inspections are adequate. The auditors reviewed the permits and quarterly reports to verify compliance throughout the recertification period and are of the opinion that environmental monitoring is conducted at frequencies adequate to characterize the medium being monitored and to identify changes in a timely manner.

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PRINCIPLE 5 – DECOMMISSIONING

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

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

☒ in full compliance with

☐ in substantial compliance with Standard of Practice 5.1

☐ not in compliance with

Basis for Audit Finding:

Goldstrike has developed written procedures for decommissioning cyanide facilities as part of overall mine closure planning. The Operating Plan for the Roaster (which includes the NBTSF) includes general statements about removing residual chemicals, decontamination, and management of draindown from the NBTSF. The mine’s two reclamation plans also contain general statements regarding decommissioning, demolition, and closure. The two reclamation permits contain Gantt charts with general closure that would cover decommissioning activities. Regulations require that reclamation plans be updated every 3 years and when there are major modifications. Goldstrike has updated their two reclamation plans during the recertification period due to facility modifications.

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

☒ in full compliance with

☐ in substantial compliance with Standard of Practice 5.2

☐ not in compliance with

Basis for Audit Finding

Goldstrike has prepared closure cost estimates, updated them regularly, and provided financial assurance to regulators. Closure cost estimates accompany their two reclamation permits. Both estimates were developed using the Standardized Reclamation Cost Estimator (SRCE), a cost model required by state regulators. The model uses third-party unit costs updated annually by the regulatory agencies. Decommissioning costs for cyanide facilities are lumped into various sections within the estimates. Regulations require that reclamation cost estimates be updated every 3 years and when there are major modifications. Goldstrike has updated their two cost estimates during the recertification period due to facility modifications. Goldstrike has established a financial mechanism with the applicable jurisdictions to
cover mine closure, including decommissioning of cyanide facilities. The financial assurance is separated according to the two reclamation permits for the mine and totals over a hundred million dollars. The estimated costs for decommissioning are substantially less the total bond amount.

**PRINCIPLE 6 - WORKER SAFETY**

Protect workers’ health and safety from exposure to cyanide.

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

☑ in full compliance with

☐ in substantial compliance with Standard of Practice 6.1

☐ not in compliance with

**Basis for Audit Finding:**

Goldstrike has developed plans and standard operating procedures (SOPs) for all cyanide facilities in the operation. The plans and SOPs describe procedures for cyanide unloading, plant operations, entry into confined spaces, and equipment decontamination prior to maintenance to minimize workers exposure to cyanide. The SOPs include provisions for the use of appropriate PPE in areas where exposure to cyanide may occur. Daily inspections must be conducted prior to beginning work by filling the Field Level Risk Assessment (FLRA) form, which records are kept electronically.

Goldstrike has developed a procedure called “Management of Change” (MOC) that described the procedures to be followed to manage change and control the potential to adversely affect the adequacy of procedures, emergency response plans, and operating plans. The MOC document includes procedures for the request of change, area reviews, risk assessment, implementation of pre- and post-actions, implementation of change, record keeping, and approval by personnel involved in the process. All request for change must be reviewed by the supervisors involved in the process and by the Barrick’s Safety, Health and Environmental Functional Area Representatives on site of within the Region.

Goldstrike solicits worker input in developing and evaluating health and safety procedures through weekly safety meetings. Workers also have the opportunity to provide their input on the daily inspection form (i.e., the FLRA).
### Standard of Practice 6.2:

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

- ☑ in full compliance with
- ☐ in substantial compliance with
- ☐ not in compliance with

### Basis for Audit Finding:

Goldstrike has developed plans, manuals and SOPs for the cyanide facilities. The manuals include pH ranges that must be maintained in the process to avoid the evolution of HCN gas. Goldstrike continuously monitors pH levels using in-line monitors. Goldstrike has developed a CN offloading procedure which includes instructions to maintain the pH of the solution between 9.5 and 10. Auditors reviewed pH time series graphs for the Roaster CIL Tank 1 and Strip Acid Wash 1 and B including the pH records and confirmed that pH was maintained between the ranges indicated above. A liquid cyanide offloading event was observed and auditors confirmed that the instructions and requirements included in the procedures were followed by the operators.

All pipes transporting cyanide were properly identified throughout the entire Goldstrike complex with yellow labels reading Cyanide and indication arrows as well showing direction of travel. Signage was posted on the cyanide storage tank, storage berms, pumping areas, and mixing tanks to indicate contents, National Fire Protection Association (NFPA) hazard rating and Global Harmonized System (GHS) hazard classification.

An SDS for cyanide was made available at the cyanide off load area and was located inside a dry plastic capped pipe for ease of access. A review of the current SDS’ was conducted and the latest version showing the presence of red dye was in the most recent version of the cyanide SDS. SDS’ were in English only, but this is the language used at the operation and the majority of the workforce (The auditors did not encounter anyone during the audit who expressed concerns with the language of documents and other information provided to workers).

Goldstrike has identified potential areas for HCN exposure and installed fixed HCN gas monitors at the areas of potential worker exposure to cyanide, including the cyanide distribution pumps at the roaster pump house, roaster CIL, paste plant, acid wash, and at the strip circuit. All personnel that may enter an area of potential cyanide exposure must wear a portable HCN gas monitor. The HCN monitor alarms are set up at two levels to protect workers from exposure to HCN gas: (1) at 4.7 ppm and above, workers must leave the area and notify the owner of the area; and (2) at 10 ppm or above, all personnel must immediately evacuate the area and notify the emergency services. Gas Badge Monitors are provided to all operators that work in and around any of the CIL Tanks; these monitors are bump tested and calibrated in accordance with manufacturer specifications with records retained. Warning signs are placed where cyanide is used to alert workers that cyanide is present.
Prior to maintenance work or confined space entry, work areas are checked for HCN concentrations with a handheld HCN monitor.

All cyanide delivered by Cyanco is dyed a red color for clear identification that the product is 30% liquid Cyanide.

Goldstrike Operations provide shower and eyewash stations at all applicable areas throughout the CIL. Fire extinguishers were also present (those observed were dry chemical fire extinguishers certified for A, B and C fires) and inspected at each of the shower areas and were current on their annual inspection as indicated on monthly labels.

Procedures are in place to discuss unplanned cyanide exposures to the workers of Goldstrike operations. At annual refresher training each year, a complete review of working safely with cyanide is discussed with all employees.

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

- ☑️ in full compliance with
- ☐ in substantial compliance with
- ☐ not in compliance with

**Basis for Audit Finding:**

Goldstrike has made available cyanide antidote kits and oxygen at the roaster laboratory, paste plant, and strip circuit control room. Automated External Defibrillators (AEDs) are distributed in several locations within the strip circuit and roaster areas. Goldstrike has two emergency response vehicles that each carry a cyanide antidote kit in case of a cyanide related emergency. Goldstrike switched from amyl nitrite to cyanokits in April 2015. Cyanokits are inspected weekly by the Emergency Response Supervisor. Weekly inspections also included rescue and first aid equipment. All Cyanokits available at Goldstrike are on the same replacement schedule. Auditors verified that the expiration of all cyanokits available at Goldstrike were current.

The Cyanide offload area (and other designated areas) is equipped with a water hose to provide water for flushing the tank filling connections or in the event of larger spills.

Goldstrike has developed a Crisis Communication and Mine Emergency Response Plan (ERP) and a Cyanide Reference ERP to respond to cyanide exposures. The ERPs contains procedures for transporting workers exposed to cyanide to the local hospital. Patients exposed to cyanide will be transported to the Northeastern Nevada Regional Hospital (NNRH) via Goldstrike emergency response vehicle or via air ambulance. Air ambulance services are included as part of a Carlin Safety contract and it is not for the...
exclusive use of Goldstrike. NNRH has cyanide antidotes readily available to be used upon patient arrival, as stated in the service agreement letter between Goldstrike and NNRH. The ERPs are reviewed either annually, after an incident or after a drill. The Cyanide Reference ERP includes emergency contacts information, procedures for emergency response for specific scenarios and off-site emergency telephone numbers, if needed.

Goldstrike has a trained and appropriately equipped Emergency Response Team (ERT) to provide medical assistance to workers exposed to cyanide. Training includes rope rescue, first responders, HazMat, and firefighting. The ERT is divided in four divisions (A, B, C, and D) with the objective to cover all work shifts.

Goldstrike conducts quarterly mock drills based on likely release/exposure scenarios to evaluate the effectiveness of the ERPs. Records show that at least one of the quarterly drills per year included a cyanide related scenario/emergency during the recertification period. The mock drills were held to test the Goldstrike’s response capabilities under a cyanide release, cyanide exposure, and a cyanide release with workers exposure to cyanide scenarios, respectively. Each mock drill was documented with a report in which opportunities for improvement were recorded to then be discussed in the annual review process of the ERPs.

**PRINCIPLE 7 - EMERGENCY RESPONSE**

Protect communities and the environment through the development of emergency response strategies and capabilities.

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

☑ in full compliance with

☐ in substantial compliance with Standard of Practice 7.1

☐ not in compliance with

**Basis for Audit Finding:**

Goldstrike has developed a Crisis Communication and Mine ERP and a Cyanide Reference ERP that address potential accidental releases of cyanide. These ERPs contain procedures for catastrophic releases, transportation accidents, releases during unloading, fires and explosions; pipes, tanks, and valve ruptures, overtopping of ponds and impoundments; power outages and pump failures, uncontrolled seepage; failure of cyanide treatment, destruction or recovery, and failure of tailings impoundments. Goldstrike has also developed SOPs for all the cyanide areas and an Environmental Division On-call Manual.

Planning for response to transportation-related emergencies is addressed by Goldstrike’s cyanide supplier

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and transporter via their certifications with the ICMI. Goldstrike purchases their cyanide exclusively from Cyanco under a contract. Cyanco contracts TransWood as their cyanide transporter. Cyanco Supply chain and TransWood were certified in 2019.

The Crisis Communication and Mine ERP, the Cyanide Reference ERP, the Environmental Division On-call Manual, and the SOPs for the cyanide areas contain detailed descriptions of the procedures for clearing site personnel from areas of exposure, first aid in case of cyanide exposure, control and containment of releases at their source, and mitigation and future prevention of releases. The North Block TSF Emergency Action Plan includes inundation maps that show that in case of an impoundment failure, the release of tailings would not reach the City of Carlin, the closest downstream community. The inundation maps were developed considering that the impoundment was at maximum design storage capacity.

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

- [x] in full compliance with
- [ ] in substantial compliance with
- [ ] not in compliance with **Standard of Practice 7.2**

**Basis for Audit Finding:**

Goldstrike discusses the implementation of their ERPs with their workforce during weekly safety meetings, training sessions, and mock drills. Workers have the opportunity to provide input during these activities. Goldstrike is a member of the Local Emergency Planning Committee (LEPC) which includes representatives of Elko County Sheriff, Newmont Mining, Elko School District, Red Cross, Elko Fire Department, and others. The closest downstream community to the site if the City of Carlin, located 27 miles southeast of the mine. No risks have been identified for Carlin in case of a potential accidental cyanide release to the environment. Inundation maps in case of an impoundment failure have been developed and they show that a release would not reach the City of Carlin. These maps were developed considering a release of the impoundment operating at its maximum design capacity.

Goldstrike has determined that no outside agencies will play a role during an onsite cyanide related emergency. Goldstrike has on-site trained teams to provide firefighting, medical emergency, and hazmat clean-up services. However, Goldstrike coordinates with external responders. Goldstrike has made a service agreement with NNRH to treat patients that have been exposed to cyanide. NNRH professionals have been appropriately trained in cyanide exposure treatment and has the appropriate facilities to do so.

Goldstrike updates their ERPs at least annually. The review process includes updates of the contact list, improvement of procedures listed in the ERPs based on mock drill evaluations, addition of response equipment to enhance response, and others. Verification was by reviewing the ERP review reports and interviewing the emergency response supervisor.
Standard of Practice 7.3:  Designate appropriate personnel and commit necessary equipment and resources for emergency response.

☑ in full compliance with

The operation is □ in substantial compliance with  Standard of Practice 7.3

☑ not in compliance with

Basis for Audit Finding:

Goldstrike has developed a Crisis Communication and Mine ERP and a Cyanide Reference ERP that include primary and alternate emergency response coordinators, a list of the ERT, requirements for appropriate training for emergency responders, call-out procedures and 24-hour contact information for the coordinators and members of the ERT, duties and responsibilities of the coordinators and ERT members, a list of emergency response equipment, procedures to inspect emergency response equipment to ensure its availability, and descriptions of the roles of outside medical facilities in the emergency response procedures. Goldstrike does not use any outside response agencies for onsite emergencies. However, Goldstrike coordinates with external emergency responders. Goldstrike has made a service agreement with NNRH to treat patients that have been exposed to cyanide. NNRH has stated that they have the capabilities onsite to treat patients that have been exposed to cyanide and their professionals have received the appropriate training to administer cyanide antidotes. The Crisis and Communication and Mine ERPs includes a full contact list for Off-Site Emergency Services, if additional support is needed for off-site emergencies.

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

☑ in full compliance with

The operation is □ in substantial compliance with  Standard of Practice 7.4

☑ not in compliance with

Basis for Audit Finding:

The Crisis and Communication and Mine ERP includes a detailed description of the communication procedures and how to activate the Incident Command System at Goldstrike in case of an emergency. Sections 2 and 6 include a complete contact information list for onsite and off-site, respectively, emergency contacts that include management, regulatory agencies, outside response providers (if needed), and the local hospital.

Goldstrike developed inundation maps in case of a tailings impoundment failure and determined that no downstream communities would be affected. Maps were developed assuming a failure of the impoundment operating at its maximum capacity. Nonetheless, the Crisis and Communication and Mine
ERP, in Section 7, includes a protocol for communications with the media, in which the Public Information Officer (PIO) is responsible for developing and releasing information about incidents to the news media, incident personnel, and other agencies and organizations.

**Standard of Practice 7.5:**

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

- [x] in full compliance with
- [ ] in substantial compliance with  
- [ ] not in compliance with  

**Basis for Audit Finding:**

Goldstrike has developed a Crisis Communication and Mine Surface ERP and the Environmental Division On-call Manual that describe remediation measures, for likely cyanide release scenarios, for the recovery or neutralization of solutions or solids, clean-up of contaminated soils or other contaminated media, and management and disposal of spill clean-up debris.

Goldstrike does not consider the use of chemicals such as sodium hypochlorite, ferrous sulfate and hydrogen peroxide to treat cyanide that has been released into surface water. Releases could not be reasonably expected to enter surface water because there are no surface water bodies in the vicinity of the mine and the site does not discharge effluents.

Environmental monitoring to identify the extent and effects of a cyanide release will be conducted as dictated in Goldstrike Water Pollution Control Permits. Contaminated soils are to be excavated and samples must be collected and sent to the lab prior to determining disposal options utilizing a qualified third party. Goldstrike has also developed a Sampling and Analysis Plan that covers water and wastewater sampling procedures. Additional instructions for sample collection are included in the Environmental On-call Manual.

Goldstrike uses bottled water as a drinking water supply. None of the other catastrophic release scenarios identified would reach drinking water supplies outside of the mine property.
### Standard of Practice 7.6:

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

- ✔ in full compliance with
- □ in substantial compliance with Standard of Practice 7.6
- □ not in compliance with

#### Basis for Audit Finding:

The Crisis Communication and Mine and the Cyanide Reference ERPs are revised annually by members of the ERT, Safety and Health management and others. The ERPs are also reviewed after mock drills, if opportunities for improvement were identified during the exercises. Goldstrike conducts quarterly mock drills based on likely release/exposure scenarios to evaluate the effectiveness of the ERPs, one of which simulates a cyanide related incident. Records show that at least one of the quarterly drills per year included a cyanide related scenario/emergency during the recertification period. The ERPs are reviewed either annually, after an incident, or after a mock drill, as described in Section 1 of the Mine Surface ERP. Mock drill reports have a section in which opportunities for improvement are recorded. Verification was conducted by reviewing the mock drill reports for 2017, 2018, and 2019.

### PRINCIPLE 8 – TRAINING

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

#### Standard of Practice 8.1:

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

- ✔ in full compliance with
- □ in substantial compliance with Standard of Practice 8.1
- □ not in compliance with

#### Basis for Audit Finding:

All new employees, regardless of their functions, are required to complete the new hire training, which include cyanide hazard recognition. Goldstrike has developed Cyanide Safety training that must be completed by all personnel who may encounter cyanide. The Cyanide Safety training includes elements of hazard recognition, potential health effects, HCN gas alarm procedures, first aid, unloading procedures, and emergency response protocols. Additionally, Goldstrike is required by MSHA to conduct Annual Refresher Training (ART) to all workers. ART includes...
cyanide training. Auditors reviewed training records for the Cyanide Safety training and individual’s employment training records for the recertification period to verify compliance. Records are kept as both hard copies and electronically for the length of employment of workers.

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

- ☑ in full compliance with
- ☐ in substantial compliance with Standard of Practice 8.2
- ☐ not in compliance with

**Basis for Audit Finding:**

Goldstrike trains their workers to perform their normal production tasks in a safe manner to minimize risk to their health and safety and to prevent unplanned releases. Goldstrike has developed Operator Competency Checklist forms for each cyanide area that list all the elements of training that must be completed by workers to acquire the minimum required skills and knowledge to perform their basic tasks in a safe manner.

Training is provided by experienced operators or area supervisors. All workers are then tested to evaluate their knowledge and understanding, and the effectiveness of the training before they are allowed to work independently. Goldstrike has developed an Operation Proficiency Assessment form that lists all the elements to be tested to demonstrate workers’ proficiency on performing their basic tasks. Scores obtained by the workers are recorded in an electronic database. The Operation Proficiency Assessment forms are signed and dated by the supervisor, trainer, and workers. Records are retained throughout workers’ employment. Refreshers are provided via annual MSHA training and weekly safety meetings. Goldstrike in an electronic database and in hard copies. Records include the name of the training/topic, worker, trainer, and supervisor, test scores, and the dates on which the training was received. The auditors reviewed records of SOP training, the Operator Competency Checklists, and Operation Proficiency Assessments to verify compliance. Random interviews with process operators were conducted to confirm that training and refreshers were given during the recertification period.

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

- ☑ in full compliance with
- ☐ in substantial compliance with Standard of Practice 8.3
- ☐ not in compliance with
Basis for Audit Finding

Goldstrike personnel involved in unloading, production and maintenance activities are trained in procedures to be followed for cyanide spills. The SOP called Sodium Cyanide includes procedures to be followed in case of a spill. For minor releases, the SOP indicates that spilled material will be shoveled or swiped into a drum followed by flushing with a dilute solution of sodium hypochlorite or calcium hypochlorite. For larger releases, workers will request the assistance of the ERT and notify the Environmental Department and provide details of the incident. The SOP also includes procedures for decontamination and first aid in case of eye contact, inhalation, and skin contact. In addition, the annual Cyanide Safety training includes sections of decontamination and first aid procedures in case a worker is exposed to cyanide.

Goldstrike trains emergency response coordinators and ERT members in the procedures described in the Crisis Communication and Mine ERP, and Cyanide Reference ERP according to a training calendar. These ERPs address cyanide first aid, patient transportation to Northern Nevada Regional Hospital, evacuation procedures, cyanide release scenarios, emergency contact information, media reporting procedures, use of emergency response equipment, and others. ERT members are also trained in Hazmat, confined space, fire rescue, cardiopulmonary resuscitation, use of AEDs, and cyanide first aid.

Goldstrike does not involve any outside emergency response agencies for on site medical emergencies. Goldstrike has complete onsite capabilities to manage onsite cyanide related emergencies; the only outside involved would be patients transported via Goldstrike ambulance to NNRH. Nonetheless, Goldstrike has shared the contents of their ERPs with the Elko County LEPC during their meetings.

Goldstrike provides refresher training in cyanide first aid, cyanide release scenarios and the ERPs on a regular basis. Refreshers are also provided during weekly safety meetings in the process areas.

PRINCIPLE 9 – DIALOGUE

Engage in public consultation and disclosure.

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

- ✓ in full compliance with
- □ in substantial compliance with
- □ not in compliance with

**Basis for Audit Finding:**

Nevada Gold Mines Goldstrike Division provides multiple opportunities for stakeholders to raise issues of concern regarding cyanide management. The Elko Visitors Guide contains a page with a Community Hotline for anonymous calls (1-800-719-0400), an email address (community@nevadagoldmines.com), and links to the corporate website (www.nevadagoldmines.com). Nevada Gold Mines is also listed in the
Elko phone book and the Elko Chamber of Commerce directory.

The Elko Free Press Mining quarterly (published and online) provides contact information as well. NGM Goldstrike is active on social media and stakeholders can make contact via Facebook, Twitter, Instagram, and LinkedIn. The Nevada Gold Mines corporate website has a “Contact Us” tab at the bottom of the page with listings for the Nevada office. The blog at Barrick Beyond Borders allows for readers to participate in an on-line discussion where issues could be raised. Finally, stakeholders can make personal contact at various meetings, permit hearings, tours, and other venues. The Goldstrike Communities and Performance Specialist – Jayme Donovan showed me minutes from these meetings and there were no complaints related to CN from these meetings.

A Community Card is made available to public that has all applicable hotline and phone numbers made available.

Should stakeholders raise issues, Nevada Gold Mines constantly maintains the grievance and opportunity register (Carlin Stakeholders Matrix) and tracks all issues, actions, follow-up, and resolutions. There were no cyanide-related grievances were logged during the recertification period.

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

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

**Basis for Audit Finding:**

Nevada Gold Mines Goldstrike Operation actively creates opportunities to provide information and interact with stakeholders regarding cyanide management.

Goldstrike participates in the annual mine expo in Elko each June where community relations, health and safety, and other departments host a booth. Goldstrike participates in high school career fairs and a program called “Gold Fever” where they visit 4th grade classrooms in Lander, Elko, and Humboldt counties.

Mine tours are offered and various mining associations, schools, universities, and community groups have participated. Goldstrike regularly participates in quarterly meetings with the Western Shoshone Tribe. Public hearings for permits are another mechanism that provides an opportunity for input.

The Communities and Performance Specialist stated a large meeting that included CEO of Barrick (86 community guests) occurred on August 6, 2019 in which the new Nevada Gold Mines Company was introduced.
Standard of Practice 9.3: Make appropriate operational and environmental information regarding cyanide available to stakeholders.

☑ in full compliance with

☐ in substantial compliance with Standard of Practice 9.3

☐ not in compliance with

Basis for Audit Finding:

NGM Goldstrike Operations has developed written descriptions of their cyanide management activities that are available to the public. However, Goldstrike is moving away from printed written materials to on-line written materials according to the Communities and Social Performance Specialist.

Staff identified websites for Barrick Corporation, Barrick Beyond Borders, and the Elko Free Press Mining Quarterly for information on cyanide management as well as community@nevada.goldmines.com

The annual responsibility reports at the Barrick Corporation website discusses the Code, while the other two websites contained articles on the replacement of cyanide with thiosulfate at the Goldstrike mine.

The Nevada Gold Mines Website was reportedly in development as well as new branding to include all of their recently deployed Nevada Operations that were initiated in Mid July 2019 but made official January 1, 2020. At the time of audit reporting, NGM was still using Barrick’s website as its public portal, for information such as publicly reporting on cyanide releases and exposures.

Serious exposure incidents must be reported to the Mine Safety and Health Administration (MSHA) where they can be accessed by the public. The auditors checked the MSHA website and found no cyanide-related reportable incidents for the recertification period.

The Nevada Division of Environmental Protection makes information regarding incidents publicly available but through a request process (https://ndep.nv.gov/environmental-cleanup/all-appropriate-inquiry). A database of open and closed cleanup activities is accessible through this website. A search of the database did not identify any incidents pertaining to this operation in the past four years.