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INTERNATIONAL CYANIDE MANAGEMENT CODE
GOLD MINING OPERATION RECERTIFICATION AUDIT
TWIN CREEKS MINE, NEVADA

SUMMARY AUDIT REPORT

Submitted to:

Newmont Mining Corporation
Twin Creeks Mine
P.O. Box 69
Golconda, Nevada 89414

and

International Cyanide Management Institute
1400 I Street NW, Suite 550
Washington, D.C. 20005

Submitted by:

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November 2017

Job Number: 0396584

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Name of Project:	Twin Creeks Mine
Project Owner / Operator:	Twin Creeks Mine is operated by Newmont Mining Corporation (Newmont)
Name of Responsible Manager:	Melissa Harmon, General Manager
Address and Contact Information:	Twin Creeks Mine P.O. Box 69 Golconda, Nevada 89414 Phone – 775-635-6632 Fax – 775-635-4723 Email – melissa.harmon@newmont.com
Audit Dates:	June 13-15, 2017

Location and History

The Twin Creeks Mine (Twin Creeks) is located in Humboldt County, Nevada, United States of America (USA), approximately 35 miles north of the town of Golconda. Twin Creeks is located on both patented and unpatented land. The unpatented land is managed by the US Department of Interior, Bureau of Land Management. Twin Creeks consists of an open pit mine, overburden piles, topsoil stockpiles, tailings impoundments, heap leach facilities, including sulfide and oxide milling circuit process buildings, heap leach gold recovery circuits, administration buildings, maintenance facilities, and access and haul roads. Mining originally began in 1986 in the northern part of the project area, known as the Chimney Creek Mine. In 1989, the Rabbit Creek Mine in the southern portion of the project area began mining. In 1993, Chimney Creek and Rabbit Creek Mines were combined and renamed Twin Creeks to pursue development of a large sulfide deposit. In 1992, Newmont merged with the owner of the Twin Creeks operation and became the owner and operator of the mine.

Description of Operation

Twin Creeks is an open pit precious metals mine with two process circuits:

1) An oxide and sulfide ore milling circuit utilizing the carbon-in-leach (CIL) process; and,
2) A heap leach process with a carbon-in-column (CIC) circuit.

Sulfide ore is milled in the Sage Mill and then conveyed to the autoclave for rapid oxidation of the sulfide minerals. The oxide ore from the Juniper Mill is mixed with the sulfide ore from the Sage Mill (autoclaves), then adjusted for pH in the Neutralization Tanks then sent to the CIL train for cyanide addition and leaching. The spent material is treated by a Caro's Acid plant for cyanide reduction prior to deposition in the tailings impoundment. The Juniper/Sage Mills at Twin Creeks receive ore for processing from other mining operations. Twin Creeks has a closed tailing storage facility and mill in the southern portion of the project area referred to as the Pinon Mill and Juniper Tailing Storage Facility (TSF). The Pinon Mill was inactive at the time of the audit except for the CIC and Funda circuit in the mill building. The Pinon TSF has been decommissioned by removal of process water from the surface and placing a vegetated cover over the impoundment. Accordingly, the Pinon TSF was not included in the initial International Cyanide Management Code (ICMC or Code) verification audit in 2007 or in the recertification audits for 2013 and 2017.

The Twin Creeks heap leach circuit consists of three heap leach facilities in the northern portion of the project area (Izzenhood/L8, Snowstorm, and Sonoma) and one heap leach facility in the southern portion of the project area (Osgood). The heap leach facilities and associated ponds are permitted as zero-discharge facilities. The heaps drain to a series of intermediate and pregnant ponds. Solutions from the pregnant ponds are pumped via pipeline to the gold recovery circuit (carbon, carbon stripping, Merrill Crowe precipitation). The process fluid management systems include:

- Leach pads (Snowstorm (phases N1 and N2), Sonoma (phases N3-N5), Izzenhood/L8 (phases S1-S5);
- Synthetic-lined and leak detection S4/S5 solution transfer sump with dedicated leak detection Leak Control and Recovery System (LCRS) sump and evacuation port;
- Barren solution ponds (North and South);
- Pregnant solution ponds;
- Intermediate solution ponds;
- Events ponds (major, minor and N5);
- Solution recovery tanks;
- Juniper TSF;
- Under-drainage collection tank;
- Tailings reclaim solution pond;
- Reagent storage facilities;
- Transfer pipes, diversion ditches, valves, and pumps used in conveyance, control or detection of process fluids between process components;
- Liner systems, leak detection systems, monitoring devices and secondary containments; and
- Process recovery buildings (Juniper and Sage Mills) including all tanks, basins, sumps, pumps and piping necessary to interconnect the components within the buildings.

The Twin Creeks open pit includes active dewatering operations. Water removed from the subsurface in the dewatering wells is discharged according to permits issued by the Nevada Department of Environmental Protection (NDEP) to a surface drainage after an arsenic treatment process. Water quality monitoring confirmed that the dewatering circuit is separate and distinct from the cyanide processing circuit.

Twin Creeks receives liquid sodium cyanide from Cyanco (located in Winnemucca, Nevada) in specially engineered tanker trucks. The sodium cyanide is delivered by TransWood Inc. (TransWood). Both Cyanco and TransWood are signatory to the Code and have been certified as compliant with the Code by third-party auditors. Twin Creeks stores and manages sodium cyanide in engineered tanks, pipelines and lined ponds that have had appropriate quality control and quality assurance. Twin Creeks' employees are trained in cyanide hazards and first aid, first response, emergency response, and specific operational task training. Twin Creeks' facilities are fenced to preclude wildlife and livestock from entering cyanide process areas. Twin Creeks conducts daily, weekly, and monthly inspections to assure that facilities are functioning as designed and to monitor process solutions. Preventive maintenance programs are in place to assure the continuous operations. Twin Creeks has approved closure and reclamation plans along with financial assurance to complete the appropriate management of cyanide solutions and solids, and the decontamination of cyanide pipelines and equipment. The plans have sufficient detail to support the ICMC compliance and cost estimation.

Twin Creeks has identified potential cyanide exposure scenarios and developed plans and Standard Operating Procedures (SOPs) to eliminate, reduce and control exposure to cyanide. Operating plans and individual task specific SOPs provide details for safe storage, handling, and distribution of sodium cyanide liquid, safe operation

of cyanide equipment, Personal Protective Equipment (PPE) requirements, and inspection requirements.

Twin Creeks has emergency response and mine rescue teams trained in firefighting, confined space, cyanide spill response and decontamination, cyanide awareness, use of response equipment and first aid for cyanide poisoning. Every shift has trained first aid personnel at the mine. Communications with the Humboldt General Hospital demonstrates that they can provide medical assistance to workers exposed to cyanide. Cyanide related spills are reported to the appropriate regulatory agencies within specified regulatory time frames.

Twin Creeks holds quarterly Community Breakfasts/Lunches in Winnemucca (or at the site) where the members of the general public and government leaders are encouraged to attend and discuss issues related to the mining operation, including the use of cyanide. Additionally, Newmont maintains a website that allows stakeholders to contact the company regarding cyanide use and management:

The International Cyanide Management Institute (ICMI) certified Twin Creeks on April 2, 2007. Since the initial certification audit the following new main activities have occurred at Twin Creeks:

- 2007: Twin Creeks was certified by the ICMI. Hydro-Jex research was started on the Osgood pads. The Izzenhood/L8 Heap Leach Phases 4 and 5 were expanded and raises at the Juniper TSF were started. A third cyanide storage tank (East Tank) was added to the Sage/Juniper cyanide storage area. The initial audit included the concrete work for this third tank. The Izzenhood/L-8 Minor Events Pond sump was upgraded. The final closure cover on the Pinon Tailings was completed. No leaching of the Sonoma leach pad.
- 2008: Milling, conventional heap leach and Hydro-Jex research continued. The D and E trains of the carbon columns at Osgood leach pad were installed. No leaching of the Sonoma leach pad.
- 2009: Twin Creeks switched from hydrogen peroxide to Caro's Acid cyanide destruction system at the Juniper/Sage Mill.to treat the tailings at the mill. The Nevada Division of Environmental Protection (NDEP) approved the Hydro-Jex system for the Osgood Pad. The Juniper TSF Cell 3 expansion was started. No leaching of the Sonoma leach pad.
- 2010: The Osgood CIC tanks of the C train were rinsed and removed. The site was recertified by ICMI in August 2010.
- 2011: Cells 1 and 2 of the tailings impoundment were built out, and Cell 3 was completed up to Stage 5 at an elevation of 5,040 feet above mean sea level (amsl).
- 2011: A cutoff trench with a pumping system designed to intercept tailings solution flow to the French drain was constructed. The cutoff trench and pumping system convey all fluid to the Underdrain Collection Pond. The Engineering Design Change (EDC) was approved in April 2011 by NDEP and construction completed in May 2011. An additional monitoring well, GW-10, was added down gradient of the trench and pond as well.
- 2011/2012: A second EDC was approved by the NDEP in October 2011 to add a seepage collection well and a second cutoff trench northwest of the first was constructed, expanding the area of collection and providing additional data on the source of the seepage. Construction was completed in January 2012. An additional monitoring well, east of the piezometer conduit collection sump, in the area of geotechnical well BH11A-02 was installed in May 2012.
- 2013: Active leaching of the Osgood leach pad was discontinued in January 2013. The system continues to operate without additional cyanide addition. The fluid from this leach pad will be recirculated until it goes into final closure with either an evaporation or an evapo-transpiration (ET) basin to handle the residual drain down.
- 2013: Addition of the pre-aeration tank on the CIL Circuit. A Cyanide Code audit was conducted in 2013 during the construction of the pre-aeration tank and prior to its completion in September 2013
- 2014: Addition of the flush pond and diversion channel. This facility also was under construction during the Cyanide Code audit in 2013. Construction was completed shortly after the audit.

- 2014/2017: Addition of Lifts 8, 9, and 10 on the Juniper Tailings Storage Facility.

Auditors: Brent Bailey, P.E., CEA, Lead Auditor

Joe Driscoll, Gold Mining Technical Expert

Certification

	☒	**in full compliance with**
The operation is	☐	in substantial compliance with **All Code Principles**
	☐	not in compliance with

The Twin Creeks 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.

Audit Company: **ERM-West, Inc.**

Audit Team Leader: **Brent Bailey**

E-mail: brent.bailey@erm.com

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

I attest that this Summary Audit Report accurately describes the findings of the verification audit. I further attest that the verification audit was conducted in a professional manner in accordance with the International Cyanide Management Institute, Mine Operations Verification Protocol (December 2016) and using standard and accepted practices for health, safety and environmental audits.

Brent Bailey		November 17, 2017
Name of Auditor	Signature of Lead Auditor	Date

Joe Driscoll		November 17, 2017
Name of Auditor	Signature Auditor	Date

Summary of Findings

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.*

The operation is

- ☒ **in full compliance with**
- ☐ in substantial compliance with **Standard of Practice 1.1**
- ☐ not in compliance with

Basis for Audit Finding: Twin Creeks has committed to only purchase cyanide from a producer which is compliant with the International Cyanide Management Code (ICMC or the Code). Twin Creeks has sodium cyanide supply contracts with Cyanco, Inc. (Cyanco). Cyanco is signatory to the ICMC and has provided third-party independent Audit Summary Reports confirming full compliance with the ICMC's Cyanide Production Principles and Standards of Practice. Cyanco was re-certified in full compliance with the Code on August 31, 2016.

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

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

The operation is

- ☒ **in full compliance with**
- ☐ in substantial compliance with **Standard of Practice 2.1**
- ☐ not in compliance with

Basis for Audit Finding: Newmont has a sodium supply contract with Cyanco stating that responsibility for and risk of loss of the product (sodium cyanide) shall remain with Cyanco until the product is actually delivered into a Newmont operation storage facility at which time title shall transfer to the operation. Twin Creeks is a Newmont operation. The contract between Twin Creeks and Cyanco specifically identifies the ICMC certification requirements as a provision. Cyanco is a signatory producer to the Code and has Transwood Inc. (Transwood) as the only transporter of cyanide from their production facility to Twin Creeks. There are no interim storages from the Cyanco plant to the mine.

Cyanco and TransWood are both signatories to the ICMC and were both re-certified by third party audits as fully compliant with the ICMC on August 31, 2016 and September 13, 2016, respectively. As ICMC certified companies, both demonstrated that they have clear lines of responsibility for safety, security, release prevention, training, and emergency response. Cyanco and TransWood do not use subcontractors.

As part of TransWood and Cyanco's ICMC certification, the requirements of this Standard of Practice were addressed to demonstrate that they are in full compliance with the Code. Therefore, Twin Creeks is in full compliance because its producer and transporter are ICMI certified.

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

☒ **in full compliance with**

The operation is

☐ in substantial compliance with **Standard of Practice 2.2**

☐ not in compliance with

Basis for Audit Finding: Newmont's supply contract is with Cyanco and requires Cyanco and its transportation personnel, distributors and contract transporters (Transwood) to comply with all applicable Code Principles, Standards of Practice, performance goals, audit recommendation and certification requirements applicable to the transportation to Twin Creeks, including the specific compliance matters set out in the *ICMI Cyanide Transportation Verification Protocol*. Cyanco is a signatory company to the Code and certified as compliant with the Code. The primary transporter Transwood is signatory to the Code and has been certified by a third party independent auditor as compliant with the ICMC with appropriate emergency response plans, capabilities and adequate cyanide management control. Twin Creeks has records documenting the ordering of cyanide and the bills of lading.

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

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

☒ **in full compliance with**

The operation is

☐ in substantial compliance with **Standard of Practice 3.1**

☐ not in compliance with

Basis for Audit Finding:

Twin Creeks' facilities for offloading and storing cyanide have been designed and constructed in accordance with applicable jurisdictional rules and/or other sound and accepted engineering practices for these facilities.

Cyanide is offloaded and stored in tanks at three locations at the Twin Creeks site. The offloading and storage areas are located within and/or adjacent to the process facilities of the Twin Creeks operation. The operation is a secure facility with controlled access and these cyanide storage areas are located away from public access and no surface water bodies are nearby.

The cyanide offload pads are constructed with cast-in-place reinforced concrete to prevent seepage to the subsurface. The concrete pads provide containment for the recovery of small cyanide liquid spills.

There are high level alarms on the storage tanks at each cyanide unloading area. Also at each tank location are signs that specify the level in the tank that is required prior to offload. There are digital readouts specifying the quantity of cyanide in storage that are checked prior to offload.

Two of the cyanide storage areas are outside with adequate ventilation. One of the storage tanks is located inside where there are HCN monitors and available ventilation.

All of the cyanide storage tanks are located away from incompatible materials; and away form foods, animal feeds, and smoking is prohibited in the cyanide storage areas.

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**

The operation is

☐ in substantial compliance with **Standard of Practice 3.2**

☐ not in compliance with

Basis for Audit Finding: Cyanide is delivered to Twin Creeks as a liquid in tankers. The liquid is transferred from the tanker to a storage tank and there are no empty cyanide containers that require disposal. Twin Creeks has developed and implemented a cyanide offload procedure that covers the responsibilities for site personnel. The procedure for offloading (Cyanide Offloading STP and Reagent Offloading SOP) prescribes the PPE and accessories that must be worn - hardhat, steel toed boots, safety glasses (face shield and or goggles), rubber boots, rubber gloves, rubber or neoprene suit, personal HCN monitor, and radio communication. The procedure requires a Newmont operator observe the transport driver during making and breaking of connections. The operator must watch the hook-up and disconnect from a distance. Additionally, the transporter has procedures for offloading liquid cyanide. TransWood's/Cyanco's offloading procedure requires the driver to monitor and control the entire offload operation. The Cyanco procedure also includes measures for responding 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. Twin Creeks' procedure involves monitoring the entire procedure. Twin Creeks has not experienced spillage or residual residue on the truck or offload facilities at the end of an offload and through the monitoring, inspecting requirements, offload activities, and inherent operator responsibility, any spillage or residue from the offload would be diligently cleaned off the offload equipment. Spills or cyanide residue on the off load equipment or in the offload area would be handled in accordance with the Emergency Response Plan. Spills inside containment would flow to a sump pump or to an adjacent process basin. If the spill or releases were outside containment it would be bermed and contaminated material relocated to the Heap Leach Pad.

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**

The operation is

☐ in substantial compliance with **Standard of Practice 4.1**

☐ not in compliance with

Basis for Audit Finding: Twin Creeks has developed and implemented operating plans for cyanide facilities, such as grinding, leaching and carbon, tailings and water, refining, and utilities and reagents. Twin Creeks also has two Fluid Management System Operating Plans, one for the north area and the other for the south area. These Fluid Management Plans contain emergency response actions for power outages, natural disasters, spills, and other upset conditions. Twin Creeks also has a Stormwater Pollution Prevention Plan (SWPPP) (July 2015) that describes the stormwater control system, defines Best Management Practices (BMPs), and specifies procedures and inspections. Some of the BMPs are related to cyanide facilities.

In addition, Twin Creeks has developed and implemented SOPs that address protection of human health and the environment for the operation of cyanide heap leach processing and the cyanide carbon-in-leach circuit for the two mills. SOPs address all the cyanide management tasks such as unloading and storage of cyanide; operation of the CIL and CIC systems; and operation of cyanide destruct circuit for tailings disposal.

Twin Creeks conducts daily, weekly, monthly, and quarterly inspections of tailings storage facilities, heap leach facilities, mills, ponds, pipelines, secondary containments, and offload/storage facilities. Inspection results are documented and corrective actions identified. Heap Leach Operation's personnel inspect the heap leach pump back and leak detection systems as well as the tailings, decant water, reclaim water, and leach pipelines daily. The heap leach pads and ponds are inspected daily. Twin Creeks conducts annual ultrasound testing of the cyanide storage tanks to verify structural integrity. The inspection forms include the date, time, name of the inspector, concerns, observations, and measurements. Review of the inspection policies and the inspection reports during the 2017 Recertification Audit show that the inspections are conducted on established frequencies sufficient to ensure and document that the cyanide facilities are functioning within the design parameters.

Twin Creeks has a formal management of change procedure that requires a hazard analysis and risk control and sign of by environmental and safety staff. An example of the use of this procedure was for construction of the Pre-aeration Tank (5/15/12) that included a risk assessment. Twin Creeks did not implement any projects or operational changes warranting the implementation of the full management of change procedure during this audit cycle. Twin Creeks also uses a Commissioning Form that requires evaluation of general health, safety, and environmental systems for smaller projects. Further, Twin Creeks utilizes a "Process Control System Software Changes & Modification Request" form for minor changes that calls for a risk assessment. Interviews with Operations, Safety, and Environmental staff during the 2017 audit demonstrated that representatives of these key functional groups are aware of changes in facilities and operations, are considering risks to safety and the environment, and are implementing measures to address and reduce these risks.

Twin Creeks uses a computer based preventive maintenance system (SAP) to identify, issue work orders and document all preventive maintenance activities and corrective actions.

The Twin Creek's fluid management program does not employ back-up emergency power in the event of a power outage, with the exception of the Seal Water for the Autoclaves. The cyanide facilities include secondary containment, diversion channels, detention ponds that are designed to accommodate fluid flows resulting from power outages. Additionally, the solutions ponds are designed to accommodate drain down during power outages. The tailings pipeline drains by gravity to the tailings impoundment, and the plant facilities have check valves to prevent uncontrolled gravity drainage. Fluid flow during a power outage is described in the Water Pollution Control Permits and the Fluid Management Plans that have been reviewed and approved by the Nevada Department of Environmental Protection. Twin Creeks has inspections that include regular testing of the backup power generators.

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**
The operation is	☐	in substantial compliance with **Standard of Practice 4.2**
	☐	not in compliance with

Basis for Audit Finding: The Juniper/Sage Mill at Twin Creeks receives ore for processing from the Twin Creeks pit and several outside sources. Twin Creeks performs pre-acceptance optimization evaluations for ores and concentrates from new sources and as long as the cyanide consumption is not abnormal then it is accepted without having to alter the existing processes. Twin Creeks has implemented cyanide addition controls through measurement of cyanide concentrations and pH in select process tanks. These are manually measured by titration every three

hours and the cyanide setpoint adjusted accordingly. Twin Creeks replaced the hydrogen peroxide cyanide destruction system in 2009 with a Caro's Acid Plant; both systems limit cyanide concentrations in tailings discharged to the Juniper Tailings Storage Facility. The completion and commissioning the pre-aeration tank for the Juniper/Sage Mill in September 2013 has resulted in the reduction of cyanide usage from 15 gpm to 2 gpm.

The Pinon Mill does not utilize a pre-aeration tank similar to the tank used at Juniper/Sage. The Pinon Mill uses cyanide only to strip the loaded carbon at that facility. The loaded carbon may be transferred from the Juniper/Sage circuit or may be loaded from the pregnant solution being rinsed from the Osgood (L-31) Leach Pad. No cyanide is added to the leach circuit thus minimizing the cyanide addition at the Pinon Mill.

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

	☒	**in full compliance with**
The operation is	☐	in substantial compliance with **Standard of Practice 4.3**
	☐	not in compliance with

Basis for Audit Finding: Twin Creeks has developed and maintains, a comprehensive, probabilistic water balance that addresses the uncertainty and variability of climatic data to prevent overtopping of critical structures. During the 2017 audit it was confirmed that the GoldSim model has been fully implemented and is being maintained for site water management. New facilities and expansions are added to the water balance in a timely manner.

Twin Creeks has one weather station and measures and records precipitation data for incorporation into the model and operational planning. Pond levels and freeboard from inspections are incorporated into the water balance model to evaluate potential overtopping. Process facility inspection procedures and data collection programs have been implemented to update the water balance model on a regular basis. Schlumberger Water Services has conducted several reviews of the water balance. The most recent was in 2014. The model calibrations indicate that it is appropriately simulating monthly precipitation and evaporation values and trends for the Twin Creeks operations.

The ponds and impoundments are designed and operated with adequate freeboard. The designs were developed to comply with the NDEP and Nevada State Engineer requirements for freeboard and design storm events and are not derived from the model. The water balance was developed as a forecast tool to analyze extreme events and changes in operations and process water needs.

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

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

Basis for Audit Finding: Twin Creeks has installed measures to restrict wildlife and livestock access to containments with cyanide-containing process solutions. These measures consist of a livestock perimeter fence around the entire property; wildlife fencing around process ponds and bird balls in the process ponds. In 2009, Twin Creeks installed a Caro's Acid plant for cyande destruction of the tailing prior to disposal. In addition, the tailings impoundment supernatant pond is equipped with propane fired air cannons. Twin Creeks has personnel trained and

ready to support bird hazing and rescue if required on the tailings impoundment. Twin Creeks has developed and implemented programs to prevent and control ponding of solution on the surface of the heap leach surfaces and uses drip emitters rather than nozzles and overspraying is not a problem.

Twin Creeks has four Industrial Artificial Pond permits with the Nevada Department of Wildlife (NDOW). Under the provisions of these permits the operation is required to conduct mortality monitoring and report all wildlife mortalities. Twin Creeks does not dispose of wildlife carcasses until authorized by NDOW. Quarterly reports to NDOW from 2014 to 2017 where 0 to 5 mortalities were reported in any single quarter (small mammals and/or birds). NDOW did not require any testing for the reported mortalities as they were not directly attributable to cyanide exposure, e.g., dead bird in vicinity of cyanide storage area, deer struck on the access road, etc.

As part of the daily inspections for heap leaches, Twin Creeks specifically checks for solution ponding and records the results on the Leach Pad Inspection form. Application rates or locations are changed when ponding areas greater than 100 square feet (sq ft) are identified. The inspection form also requires sampling the ponded solution for pH and cyanide. The form specifies that corrective actions are documented and follow-up inspections conducted. For ponding areas of concern that are less than 100 sq ft, a follow-up inspection is required. There was no ponding exceeding the stated Twin Creeks criteria during inspections of the heap leach pads during the audit.

Twin Creeks measures WAD cyanide concentrations in the TSF and Heap Leach Ponds daily. In 2009, Twin Creeks installed cyanide destruction plant to reduce the cyanide concentrations in the TSF, which has resulted in consistent low WAD cyanide concentrations in the Juniper Tailings Storage Facility (TSF). Measured WAD cyanide concentrations show that the levels in the TSF range from 1.4 to 30.6 mg/l. Sampling of tailings. The sampling of tailings slurry, for the purpose of WAD-CN analysis, takes place at the active spigoting location. Additional sampling for operational uses is taken at various locations to insure proper operation of the cyanide destruction plant.

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 **Standard of Practice 4.5**

☐ not in compliance with

Basis for Audit Finding: Twin Creeks is designed and operated for zero-discharge of process fluids. Operation performance history, design criteria and the project water balance indicate that facilities operation is consistent with the zero-discharge requirements. Inspections, spill prevention, and emergency response plans have been developed to comply with the zero-discharge operating requirements.

The Twin Creeks' Storm Water Pollution Prevention Plan (SWPPP) states that process water and/or stormwater associated with cyanide facilities is managed to prevent any indirect discharge to surface water. The site maintains major and minor events ponds to ensure adequate retention in the event of a storm event.

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

☒ **in full compliance with**

The operation is

☐ in substantial compliance with **Standard of Practice 4.6**

☐ not in compliance with

Basis for Audit Finding: The cyanide facilities at Twin Creeks are designed and operated to protect groundwater. Double geomembrane liners with leak detection under all cyanide heap leach facilities; double geomembrane liners with leak detection and collection systems for all process water and minor events ponds; single geomembrane liners for all major events ponds (used only in emergency or upset conditions); geomembrane-lined secondary containment ditches or pipe-in-pipe containment for all cyanide-bearing pipelines; and underdrains with seepage collection systems above a low permeability layers under all cells of the Juniper TSF. The Juniper Tailings Storage Facility is underlain by low permeability layer (seal zone soils) and a drain gravel layer with perforated pipes to collect seepage; the tailings embankments have clay core at the lower levels and High Density Polyethylene (HDPE) liner where the supernatant pond contacts the embankment; and the embankments also have seepage collection systems.

In April 2010, flow ranging from 4 to 8 gpm was observed in the French drain system under the Juniper TSF Underdrain Collection Pond. Analysis of samples of this water showed process signature and the NDEP responded with a Notice of Alleged Violation (NOAV) requiring Twin Creeks to investigate and propose corrective actions. A series of test pits were constructed and tailings solution flow to the French drain was identified in the area northeast of the Underdrain Collection Pond. As a follow-up the investigations, a cutoff trench with a pumping system designed to intercept the flow and convey all fluid to the Underdrain Collection Pond was constructed in May 2011. An additional monitoring well, GW-10, was added down gradient of the trench and pond as well. In January 2012, in response to additional field investigation results, Twin Creeks completed construction of an additional seepage collection well and a second cutoff trench northwest of the first. This expanded the area of collection and provided additional data on the source of the seepage. Twin Creeks is now required to sample fluids collected in the cutoff trench and report the results, along with flowrates, in the quarterly reports to the agency. Investigation of potential sources of the seepage and possible corrective actions are ongoing, as well.

The seepage control system was operational during the 2017 audit cycle and a review of Annual Reports to NEDP for 2014, 2015, and 2016 showed WAD cyanide concentrations in groundwater monitoring wells GW-8 GW-10, and GW-11 (the downgradient wells) have remained below 0.2 mg/l over the three-year period. Twin Creeks included in its annual reports the following statement. “Newmont finds the remedial measures to be functioning properly and will continue to monitor and operate the seepage collection system.”

The regional groundwater meets the beneficial use for a drinking water source, with the exception of arsenic concentrations. (The arsenic concentration is independent of the Twin Creeks Operation.)

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

☒ **in full compliance with**

The operation is

☐ in substantial compliance with **Standard of Practice 4.7**

☐ not in compliance with

Basis for Audit Finding: The Twin Creeks operation has secondary curbed concrete containments for all cyanide

storage and processing areas. The secondary containments for all of the cyanide unload and storage areas have a volume of at least 110 % of the volume of the largest tank and the volume of water from a design storm event. Other secondary containments include pipe-in-pipe and geomembrane-lined channels. Secondary containment in the process areas has automated pumping systems for management of tank leakage. SOPs have been developed to address management of spill response and clean-up within the containments. Review of the facilities and records indicated that all tanks, piping and containments are constructed of materials appropriate for handling high pH cyanide solutions. Review of maintenance records indicated that the containments were properly inspected and maintained.

There have been no changes to the secondary containment configuration or to the process tanks during the 2017 audit cycle and therefore the initial evaluations of the adequacy of the secondary containment is still valid.

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

☒ **in full compliance with**

The operation is

☐ in substantial compliance with **Standard of Practice 4.8**

☐ not in compliance with

Basis for Audit Finding: The construction of the heap leach and tailings expansions has been verified by qualified engineering companies and includes detailed Quality Assurance/Quality Control (QA/QC) data collection and documentation. The QA/QC documents indicate that the construction was completed according to engineering standards and specifications. The installation of tanks, valves and piping was undertaken in-house, but Twin Creeks then commissioned independent QA/QC of the completed work. Twin Creeks has retained all QA/QC information.

Facilities and improvements constructed during the 2017 audit cycle include:

- Pre-aeration Tank (CIL Circuit),
- Juniper Tailings Disposal Facility: Increased the height of the tailings dikes with Lifts 8 and 9. Lift 10 under construction during the 2017 audit**,** and
- Construction of the Flush Pond and diversion channel.

Design reports and QA/QC documents for these improvements showed that QA/QC measures meeting the cyanide code requirements were followed.

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 **Standard of Practice 4.9**

☐ not in compliance with

Basis for Audit Finding: Twin Creeks has developed environmental monitoring programs to evaluate the performance of the cyanide management systems on wildlife, surface and groundwater quality. The environmental programs have been prepared and approved by qualified professionals and implemented by qualified personnel and include all appropriate sampling and analysis documentation.

Twin Creeks conducts monitoring at frequencies adequate to characterize the groundwater, seepage collection systems, leak detection systems, and process solutions. Groundwater samples are collected and analyzed on a quarterly basis; as well as the seepage collection systems. The leak detection systems are pumped on a weekly basis and reported as a daily average. Process solutions are monitored at least daily and in many cases several times per day. Quarterly groundwater monitoring reports to NDEP for the period from 2014 to 2017 confirmed that the required locations are being monitored at the required frequencies

Twin Creeks trains all employees to monitor wildlife mortalities. Quarterly Wildlife Mortality Reports to Nevada Department of Wildlife (NDOW) for the period from 2014 through 2016 confirmed that inspections were conducted and mortalities reported.

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

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

☒ **in full compliance with**

The operation is

☐ in substantial compliance with **Standard of Practice 5.1**

☐ not in compliance with

Basis for Audit Finding: Twin Creeks has developed a comprehensive closure and reclamation plan that addresses decommissioning of all cyanide facilities, including a schedule for closure activities. The plan has sufficient detail to support the Code compliance. The plan includes written procedures to decommission the cyanide facilities including: heap leach facilities, process ponds, and processing facilities. The plan includes general descriptions of the commitments for management of cyanide solutions, encapsulation of solids with covers, collection, and control of seepage, rinsing of equipment, pipelines and tanks that contained cyanide solution and disposal of piping and other equipment. Twin Creeks is required by State of Nevada regulations and their permit requirements to review and update the Reclamation Plan at least every three years. (The most recent update was August 2014.) Additionally, Twin Creeks conducts an internal review and update of reclamation and closure requirements and obligations on an annual basis.

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

☒ **in full compliance with**

The operation is

☐ in substantial compliance with **Standard of Practice 5.2**

☐ not in compliance with

Basis for Audit Finding: Twin Creeks' decommissioning cost estimate has been reviewed and approved by the Nevada Department of Environmental Protection (NDEP) and the United States Bureau of Land Management (BLM). The estimate includes costs for a third-party contractor to complete the work and management costs for the process to be overseen by the BLM. Assumptions are documented and calculations have been prepared by Twin Creeks' professionals using the BLM and the NDEP approved model (Standardized Reclamation Cost Estimator).

Twin Creeks is required by the State of Nevada regulations and their permit requirements to review and update the cost estimate at least every three years. Additionally, Twin Creeks' conducts an internal review and update of mine

closure liabilities every year.

Twin Creeks has established approved financial mechanisms to cover the estimated costs for cyanide related decommissioning activities.

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**

The operation is

☐ in substantial compliance with **Standard of Practice 6.1**

☐ not in compliance with

Basis for Audit Finding: Twin Creeks has evaluated potential cyanide exposure scenarios and updated its operating plans and procedures to incorporate the procedures required for its cyanide operations. Individual task specific SOPs provide details for safe operation of cyanide equipment, personal protective equipment requirements, and inspection requirements. SOPs and Standard Task Procedures (STPs) as well as shift logs maintained by the operators, daily inspections, and monthly inspection forms were reviewed to verify Code compliance.

Twin Creeks has a formal management of change procedure that requires a hazard analysis and risk control and sign of by environmental and safety staff. An example of the use of this procedure was for construction of the Pre-aeration Tank (5/15/12) that included a risk assessment. Twin Creeks did not implement any projects or operational changes warranting the implementation of the full management of change procedure during this audit cycle. Twin Creeks also uses a Commissioning Form that requires evaluation of general health, safety, and environmental systems for smaller projects. Further, Twin Creeks utilizes a "Process Control System Software Changes & Modification Request" form for minor changes that calls for a risk assessment. Interviews with Operations, Safety, and Environmental staff during the 2017 audit demonstrated that representatives of these key functional groups are aware of changes in facilities and operations, are considering risks to safety and the environment, and are implementing measures to address and reduce these risks..

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

☒ **in full compliance with**

The operation is

☐ in substantial compliance with **Standard of Practice 6.2**

☐ not in compliance with

Basis for Audit Finding: The pH of the cyanide solution is monitored and maintained to prevent the formation of Hydrogen Cyanide (HCN) gas as recommended in the operating plans. Fixed HCN gas monitors with audible alarms and warning lights at 4.7 parts per million (ppm) ("Investigate and Correct") and 10 ppm ("Evacuate") are installed in areas of potential exposure to cyanide. The HCN fixed monitors have lights and horns that are local. The "Emergency Button" next to the eye wash stations reports to the Juniper Control Room with a light and an audible alarm. If a person in a cyanide or process area needs assistance, they press the button and the process operations personnel will respond.

In addition, Twin Creeks has handheld HCN meters (Industrial Scientific - MX6 HCN meters.), which are made

available to employees to check the hydrogen cyanide concentrations in any area. Prior to maintenance work or confined space entry, work areas are checked for HCN concentrations with a handheld HCN meter. HCN monitors are maintained, calibrated and inspected as recommended by the manufacturer. Warning signs are in areas where cyanide is used to alert workers that cyanide is present, that smoking, open flames, eating and drinking are not allowed and that the necessary cyanide-specific PPE must be worn. Pipes carrying cyanide are marked and the direction of flow is indicated with arrows on the pipes. Also, signage for confined spaces at the tank entry points have been placed.

Shower and eyewash stations are located at the cyanide offloading areas and throughout the process areas. Showers and eyewash stations were inspected and determined to be operational. Fire extinguishers are located throughout the facility and are inspected monthly (pin, handle, hose and pressure) by Twin Creek staff and annually by a Nevada State certified 3rd party contractor (empty, pressure test and fill). All fire extinguishers located where personnel may be exposed to cyanide are type ABC dry powder extinguishers and are inspected and maintained on a monthly basis by a designated Newmont Fire Compliance Technician and pressure tested and certified annually by Nevada Fire Control.

Safety Data Sheets (SDSs) are available via the Newmont Intranet at any computer terminal throughout the plant. The SDSs are in English, the language of the workforce. Twin Creeks has an Accident Investigation Policy that requires all incidents and accidents involving cyanide exposure be investigated and evaluated to determine if its programs and procedures to protect worker health and safety and to respond to cyanide exposures are adequate or if changes are necessary.

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

	☒	**in full compliance with**
The operation is	☐	in substantial compliance with **Standard of Practice 6.3**
	☐	not in compliance with

Basis for Audit Finding: Each of the cyanide offloading areas is equipped with a cabinet containing PPE, an oxygen resuscitator, and a cyanide antidote kit (amyl nitrite). Other areas where PPE, resuscitators, and antidote kits are located are the Juniper control room and buildings near the off load areas The Emergency Response Vehicles (ERVs) have oxygen, Automated External Defibrillator (AED), and cyanide antidote kits (amyl nitrite). Cyanide operators have a radio to contact their supervisor, when needed. The emergency response equipment (including cyanide antidote kits, Self-Contained Breathing Apparatus (SCBAs), oxygen kits, and 5 minute escape capsules) is inspected monthly. Supplies are replaced if used and inspection records are maintained. The antidote is stored and replaced as specified by the manufacturer's recommendation. The antidote is stored with-in the recommended temperature range and replaced prior to the expiration date.

The Twin Creeks Emergency Response Plan (ERP) contains information regarding emergency response procedures for cyanide exposures. Additionally, the "Spills in Cyanide Secondary Containment" includes instructions for working with cyanide, cyanide hazards and emergency response actions for cyanide exposure and spills. Twin Creeks has employees trained to serve as First Responders and Emergency Medical Responnders (EMRs). Every shift has at least one employee medically trained on the administration of amyl nitrate and oxygen for treatment of cyanide exposure.

Twin Creeks has formalized arrangements with the Humboldt General Hospital to provide medical assistance to workers exposed to cyanide. The hospital has acknowledged that they understand a cyanide exposure incident could occur at the Twin Creeks and that they have the necessary resources to respond effectively to a concentrated cyanide exposure (correspondence dated March 5, 2012). Additionally, Humboldt General Hospital in their EMS manual, Guidelines and Procedures discusses measures to follow in responding to a cyanide exposure incident. In the event

of a cyanide accident, Twin Creek will administer the necessary first aid and call the Humboldt General Hospital in Winnemucca to dispatch an ambulance to the site. The mine will deploy an ERV with the patient and meet the ambulance at a prescribed point on the mine road. The patient will be transferred to the ambulance for transportation to the hospital. These procedures are described in the ERP. Twin Creeks conducts cyanide related mock drills based on likely release/exposure scenarios to test response procedures and to incorporate lesson learned from the mock drills into its response planning.

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

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

☒ **in full compliance with**

The operation is

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

☐ not in compliance with

Basis for Audit Finding: Twin Creeks has developed several plans and SOPs that address emergency response to potential accidental releases of cyanide. Twin Creeks plans contain procedures for potential scenarios such as: cyanide intoxication; on-site accidents during cyanide transportation; releases during offloading and mixing; cyanide related fire and explosion; pipe, valve or tank ruptures; electrical power outage and pump failures; overtopping of ponds and tailings impoundment; uncontrolled seepage; tailings impoundment failure or heap leach pad slope failure; failure of the cyanide destruction system; cyanide spill control and clean-up; and decontamination and emergency evacuation.

The Twin Creek's fluid management program does not employ back-up emergency power in the event of a power outage, with the exception of the Seal Water for the Autoclaves. The cyanide facilities include secondary containment, diversion channels, detention ponds that are designed to accommodate fluid flows resulting from power outages. For example, the tailings pipeline drains by gravity to the tailings impoundment, and the plant facilities have check valves to prevent uncontrolled gravity drainage. The solutions ponds are designed to accommodate drain down during power outages. There are emergency generators at the Sage Mill for the Autoclave Seal Water Pumps, the north area is for the Administration Building, the site location, Midway, that powers an air compressor to start the Haul Trucks, and the Pinon Mill. The emergency generators are inspected and maintained on an annual basis. Fluid flow during a power outage is described in the Water Pollution Control Permits and the Fluid Management Plans that have been reviewed and approved by the Nevada Department of Environmental Protection.

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

☒ **in full compliance with**

The operation is

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

☐ not in compliance with

Basis for Audit Finding: Twin Creeks workforce participates in the emergency response planning process through their weekly safety meeting and through mock drills. The site is remote and the nearest community, Golconda, is over 25 miles away. There are no identified risks of release scenarios that may affect it. The ERP does not designate any responsibilities to offsite responders and communities. Mock emergency drills are conducted periodically as part of the ERP evaluation process. All of the mock drills are evaluated and discussed in post-drill meetings with problems and areas of improvements outlined. Twin Creeks has a formalized arrangement with the Humboldt

General Hospital to provide medical assistance to workers exposed to cyanide, if needed.

Twin Creeks participated in mock drills involving Humboldt County (via Local Emergency Planning Committee [LEPC]) Also, Twin Creeks hosts and participates in Winnemucca Community Breakfasts/Lunches to discuss the operation and the use of cyanide. These meetings allow the general public the opportunity to comment on all aspects of the operation including the use of cyanide. The Emergency Response Coordinator is a member of the LEPC that allows for the communication of the use of cyanide at the mine and the discussion of emergency response in case of a cyanide accident.

Twin Creeks has communicated with the Humboldt General Hospital regarding the mine's use of cyanide and the potential for the hospital to provide medical assistance to workers exposed to cyanide, if needed. Humboldt General Hospital has been providing ambulance services to Twin Creeks for multiple years. Their skill set includes the ability to respond to cyanide exposure victims as well as other medical emergencies. As they have added response tools, they have been incorporated into the Twin Creeks' response protocol. A recent example was the addition of Helicopter Transportation Service, which was tested with a visit by the helicopter and crew and the sharing of the coordinates for the Emergency Response Building in the Midway Complex.

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: Twin Creeks has committed in its ERP the necessary emergency response and first aid equipment to manage all cyanide incidents at the operation and to coordinate transportation to the nearest medical facility. The ERP defines the individuals (primary and alternate) capable to commit the resources necessary to implement a plan in the event of an emergency situation. The ERP lists the on-site Emergency Responders and includes their emergency contact information, rotation schedule and certifications. Training for Emergency Responders includes firefighting, Hazardous Materials (HazMat), advanced first aid, vehicle and equipment rescue, rope rescue, incidents command and others. The training includes details for providing first aid for personnel exposed to cyanide, to administer amyl nitrite, locations of cyanide antidote kits, medical oxygen, hazard awareness associated with sodium cyanide and HCN gas, victim and rescuer decontamination procedures. Training also includes procedures described in the ERP. Specific duties and responsibilities of the coordinators and team members are defined in the ERP.

The ERP includes call-out procedures and 24 hour contact information for coordinators and response team members. Twin Creeks has developed procedures for weekly inspections and inventories of rescue equipment as well as procedures for inspecting the cyanide kits, five minute escape bottles and SCBAs. All emergency equipment and supplies are inspected on a regular basis. The ERP provides detailed contact information and describes the anticipated roles of the Humboldt General Hospital, if needed. Twin Creeks has communicated with Humboldt General Hospital regarding the mine's use of cyanide and the potential for a cyanide exposure. The hospital administrator acknowledged in writing that they understand that a potential cyanide exposure can occur at the Twin Creeks Mine Site and that they have qualified staff, equipment and expertise to be able to respond effectively to a concentrated exposure to cyanide. Twin Creek participated in a mock drill with the Humboldt County LEPC in 2016.

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 ERP includes procedures and contact information for notifying management, Cyanco, the Mine Safety and Health Administration (MSHA), the State of Nevada, Humboldt General Hospital, and numerous other organizations in the event of a cyanide emergency. The Twin Creeks Fluid Management System Operating Plan – ERP includes emergency telephone numbers: ambulance; fire department; police; sheriff; Humboldt General Hospital; 3E Company (chemical emergency); Washoe Poison Control Center in Reno; Twin Creeks Management Personnel; Bureau of Land Management; and Carlin Security. Newmont also has a corporate Rapid Response Team Procedure that includes communication procedures for media notification.

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.*

☒ **in full compliance with**

The operation is ☐ in substantial compliance with **Standard of Practice 7.5**

☐ not in compliance with

Basis for Audit Finding: Twin Creeks has developed cyanide response and remediation plans that address appropriate uses and situations for cyanide treatment chemicals. The ERP and the Fluid Management System Operating Plans include response procedures for liquid sodium cyanide and diluted process solutions. Spilled liquid sodium cyanide solutions are to be contained or diluted with water. If low pH conditions occur then lime will be spread to increase to the pH value to at least 10. Twin Creeks has not used chemicals to treat cyanide releases during the past audit cycle. It is their intention not to use chemicals other than process water for cyanide cleanup. This has eliminated the need for a decontamination chemical, preparation procedure and a storage location.

The Fluid Management System Operating Plans require cyanide releases to be disposed of on the leach pad areas, or returned to the process circuit depending on the physical nature of the release. The Procedure for "Spills in Cyanide Secondary Containment" defines locations where spills can be pumped. After clean-up is complete, soil samples will be taken and analyzed to verify total cleanup success. Necessary monitoring activities in the event of a release will be conducted in line with the requirements of the Water Pollution Control Permits (WPCPs) (Permits NEV0086018 and NEV0089035) and in coordination with the NDEP Bureau of Mining Regulation & Reclamation representative, if warranted by extent of the release. Twin Creeks has a potable water system and also uses bottled water for drinking water supply. In the event of a cyanide release, bottle water would be used.

The ERP prohibits the use of chemicals to treat cyanide that has been released into surface waters. There are no surface water bodies on the property.

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

	☒	**in full compliance with**
The operation is	☐	in substantial compliance with **Standard of Practice 7.6**
	☐	not in compliance with

Basis for Audit Finding: The Twin Creeks' ERP includes a section for periodic review and update of emergency response procedures; and the operation reviews the plan yearly and makes adjustments as deemed appropriate. Twin Creeks pointed to the lack of incidents with cyanide solutions as evidence of the proper management of cyanide onsite. This has minimized the need to make changes to the ERP. Evidence of the review and revision to the 2014 and 2016 versions were reviewed during the 2017 audit.

Twin Creeks conducts mock drills on a regular basis to practice and prepare for emergencies and to provide insight into the effectiveness of the ERP. The ERP is also reviewed following any incident or mock drill requiring its implementation. The auditors reviewed mock drill reports and previous versions of the ERP to verify compliance with this item.

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

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

	☒	**in full compliance with**
The operation is	☐	in substantial compliance with **Standard of Practice 8.1**
	☐	not in compliance with

Basis for Audit Finding: All site personnel are trained for cyanide safety as part of the "New Hire" training and during the Annual Refresher Training. New hire training materials include: physical and chemical characteristics, safe handling, PPE, poisoning symptoms, first aid for cyanide overexposure, and safety precautions (including the emergency breakaway device of the cyanide truck). Employees who are assigned to specific areas of operations (or circuits) where cyanide is an integral part of the process receive supplemental training on the safe use and handling of cyanide.

Twin Creeks requires all employees to have annual refresher training that includes cyanide training. Cyanide refresher training includes: emergency communication procedures, signs, audible and visual alarms, cyanide safety awareness, hazard communications, hazardous materials identification labels, routes of entry, first aid and MSDSs. Employees working with cyanide receive annual refresher on cyanide as part of the annual MSHA and Hazard Communication (HAZCOM) training.

Twin Creeks retains all cyanide training records for all employees. Training records include the names of the employee and the trainer, the date of training, the topics covered, and test results demonstrating an understanding of the training.

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

	☒	**in full compliance with**
The operation is	☐	in substantial compliance with **Standard of Practice 8.2**
	☐	not in compliance with

Basis for Audit Finding: In addition to the training in cyanide hazard recognition, all personnel in job positions that involve the use of cyanide and cyanide management (including offloading, mixing, production and maintenance) receive training on how to perform their assigned tasks with minimum risk to worker health and safety. Task specific training includes SOPs, STPs, and descriptions of operating circuits. Training on operating circuits is designed to ensure that the operator has the required skills, knowledge and ability to safely operate the circuits without direct supervision. The training includes cyanide safety, environmental, and process issues. The employee's knowledge is checked through the requirement to pass oral and written tests on the current circuit prior to working on the next circuit. A record is maintained demonstrating the level of training the employee has received on each circuit (e.g., Juniper Carbon Strip Circuit, Pinon and CIC Circuits, Leach South Area Circuit, and others).

All personnel in job positions that involve the use of cyanide and cyanide management receive training on how to perform their assigned tasks with minimum risk to worker health and safety. Task-specific training is provided prior to working independently with cyanide. In addition to the job specific training, Twin Creeks provides training in "Site Specific Hazard" and "Cyanide Safety" that includes cyanide management and first aid.

Qualified personnel provide task specific training to new operators on various unit processes and cyanide management. Additionally, employees and operators receive training that meets the requirements of MSHA and HAZCOM. The Senior Process Trainer, who provides annual cyanide refresher training, is a qualified trainer having received training on cyanide from Cyanco.

Twin Creeks requires and provides annual refresher for cyanide management. Cyanide refresher training includes: emergency communication procedures, signs, audible and visual alarms, cyanide safety awareness, hazard communications, hazardous materials identification labels, routes of entry, first aid and MSDSs. Employees working with cyanide receive annual refresher on cyanide in the MSHA and HAZCOM training. In addition, Twin Creeks discusses cyanide related health and safety issues as well as changes in cyanide management SOPs, if any, at safety meetings.

Twin Creeks uses both written, digital (electronic), and verbal examinations to evaluate the effectiveness of the training and the employee's knowledge as it relates to understanding cyanide issues and safety measures. Records are retained of written and as well as results of verbal quizzes. In addition, employees are evaluated on their job performance by their supervisors through field observation of specific tasks. Training records are retained by Twin Creeks. Training records include the name of the employee and the trainer, the date of training; the topics covered, and test results demonstrating an employee's understanding of the training materials.

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

	☒	**in full compliance with**
The operation is	☐	in substantial compliance with **Standard of Practice 8.3**
	☐	not in compliance with

Basis for Audit Finding: All personnel responsible for offloading, mixing, production, and maintenance are trained in the procedures to be followed if cyanide is released. Training includes cyanide awareness, cyanide emergency response (including evacuation), first aid for cyanide poisoning, spill response (spills and leaks in the process area, spills during transportation of cyanide, etc.), use of the emergency response equipment, emergency communication procedures, signs, audible and visual alarms and SDSs. All employees working on cyanide circuits have received training in decontamination and first aid procedures. Emergency Responders are trained in firefighting, HazMat, advanced first aid, vehicle and equipment rescue, rope rescue, incidents command and others. Emergency Response Coordinators, Emergency Responders and First Responders are all trained in the procedures described in the ERP, including the use of necessary emergency response equipment. They have participated in the cyanide mock drills.

The ERP does not designate any responsibilities to offsite responders or communities. Twin Creeks has formalized arrangements with the Humboldt General Hospital to provide medical assistance to workers exposed to cyanide, if needed. The hospital is aware of its potential need to treat patients as demonstrated by correspondence with the hospital, March 2012.

Twin Creeks requires and provides annual refresher for cyanide management, including cyanide exposure and releases. Cyanide refresher training includes: emergency communication procedures, signs, audible and visual alarms, cyanide safety awareness, hazard communications, hazardous materials identification labels, routes of entry, emergency actions for cyanide exposures and releases, and SDSs. Employees working with cyanide receive annual refresher on cyanide in the Mine Safety and Health Administration (MSHA) and HAZCOM training. Training of the Emergency Responders also includes cyanide related emergency scenarios. Training agendas include a review of HCN intoxication and the administration of the amyl nitrite. Twin Creeks also discusses cyanide related health and safety issues at safety meetings.

Twin Creeks conducts mock drills to practice and prepare for emergencies and to provide insight into the effectiveness of the ERP. Mock drills have been conducted for a fire and possible hazardous material spill, a man down in a secondary containment area, and a leak of cyanide from a truck carrying NaCN solution. The drills were documented and included lessons learned. All of the mock drills are evaluated and discussed in post-drill meetings with problems and areas of improvements outlined and incorporated into the training programs.

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

9. DIALOGUE: Engage in public consultation and disclosure.

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

☒ **in full compliance with**

The operation is ☐ in substantial compliance with **Standard of Practice 9.1**

☐ not in compliance with

Basis for Audit Finding: Twin Creeks provides the opportunity to communicate issues of concern with the public through community communication sessions. Twin Creeks holds quarterly "Community Breakfasts/Lunches" in Winnemucca (or at the site) where the members of the general public and government leaders are encouraged to attend and discuss issues related to the mining operation, including the use of cyanide.

Additionally, Newmont (Twin Creeks) maintains a website that allows stakeholders to contact the company regarding cyanide use and management:

http://www.newmont.com

Finally, stakeholders may comment during project permitting via "Open Houses" and public comment periods. No cyanide related issues of concern have been documented within the past 36 months.

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

☒ **in full compliance with**

The operation is ☐ in substantial compliance with **Standard of Practice 9.2**

☐ not in compliance with

Basis for Audit Finding: Twin Creeks creates opportunities to interact with stakeholders and provide them with information regarding cyanide management practices and procedures. Twin Creeks holds quarterly "Community Breakfasts/Lunches" where members of the general public are provided with information on the operation and the use of cyanide. There is a phone number and e-mail address listed on the monthly "Newmont Notes" community newspaper that allows individuals to inquire regarding cyanide use and other issues. Twin Creeks provides periodic public tours of the facility, which includes a video called "How Gold is Produced in Nevada Today" and a safety handbook.

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

☒ **in full compliance with**

The operation is ☐ in substantial compliance with **Standard of Practice 9.3**

☐ not in compliance with

Basis for Audit Finding: The Twin Creeks WPCPs require the company to file quarterly and annual reports to

NDEP that includes a report of any cyanide spills and releases. These reports are available to the public. Additionally, Twin Creeks is required to complete MSHA reports that would include any cyanide related worker exposure or death. Operational and environmental information is provided in Newmont's corporate annual report and on Newmont's website.

Newmont maintains a website that allows stakeholders to contact the company regarding cyanide use and management:

http://www.newmont.com

This site is provided a link "#BeyondTheMine" that leads to the Newmont Sustainability Report where there is a discussion of "Cyanide Management" under "Environmental Stewardship". The site is provided with a "Contact Us" tab that allows an individual to contact the company via email.

Newmont's corporate sustainability document includes the types and the number of cyanide incidents for all operations including Twin Creeks.