DECEMBER 2014

ICMC INITIAL CERTIFICATION SUMMARY AUDIT REPORT

PUEBLO VIEJO MINE DOMINICAN REPUBLIC

Submitted to:

International Cyanide Management Institute
888 16th Street, NW-Suite 303
Washington, DC 20006
United States of America

Pueblo Viejo Dominicana Corporation
Novo – Centro, Piso 16
Av. Lope de Vega No. 29, Ens. Naco
Santo Domingo
Dominican Republic

Project Number: 1406340

Distribution:

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Table of Contents

FIGURES

1.0 SUMMARY AUDIT REPORT FOR GOLD MINING OPERATIONS

Name of Mine:	Pueblo Viejo Mine
Name of Mine Owner:	Barrick Gold Inc.
Name of Mine Operator:	Pueblo Viejo Dominicana Corporation
Name of Responsible Manager:	Ettiene Smuts, Mine Manager
Address:	Novo – Centro, Piso 16 Av. Lope de Vega No. 29, Ens. Naco
State/Province:	Provincia Sanchez Ramirez
Country:	Dominican Republic
Telephone:	+1 (809) 331-7878
Fax:	+1 (809) 240-0691
E-Mail:	esmuts@barrick.com

2.0 LOCATION DETAIL AND DESCRIPTION OF OPERATION

Mine Location

The Pueblo Viejo Mine is located in the Dominican Republic approximately 100 kilometers (km) northwest of the capital city of Santo Domingo (Figure 1). Barrick Gold Corporation (Barrick) holds a 60 percent interest and is the operator; Goldcorp holds the remaining 40 percent interest. The Pueblo Viejo Mine is operated by Pueblo Viejo Dominicana Corporation (PVDC).

Figure 1: Regional Location Map

Background

The Pueblo Viejo Mine (Pueblo Viejo) is located in the Dominican Republic approximately 100 kilometers (km) northwest of the capital city of Santo Domingo (Figure 1). Barrick Gold Corporation (Barrick) holds a 60 percent interest and is the operator; Goldcorp holds the remaining 40 percent interest. Small communities within approximately 25 km of the mine include Cotui, Maimon, Piedra Blanca, Socorro, Palo de Cuaba, and others. Pueblo Viejo started operating in 2012.

Pueblo Viejo consists of mining and processing ore from the expansion of two existing open pits: the Monte Negro Pit and the Moore Pit. The ore is processed to recover gold, silver, and copper (Figure 2). The tailings from the processing plant are pumped to the tailings storage facility (TSF) in the Llagal Valley. Lime for the processing plant is supplied by mining from limestone quarries at the site. The principal project components for the Pueblo Viejo mine site are shown in Figure 3.

The mine life is currently projected at approximately 28 years. During the mine life, the higher grade ores are processed and lower grade ores placed in the low grade stockpiles. After active mining ceases, these lower grade ores may be processed.

The ore and waste rock are mined using hydraulic shovels and are supplemented with front-end loaders as needed. The material is transported in haul trucks. There is a pit dewatering system to handle surface runoff into the pits and pumping of groundwater inflow to stabilize the pit highwalls.

The run-of-mine ore is routed to the primary gyratory crusher. The crushed ore is placed in the coarse ore stockpile. Lower grade run-of-mine ore is placed in the low grade stockpiles. The waste rock is trucked to the El Llagal Tailings Storage Facility (TSF) and is co-disposed with the tailings from the ore processing.

Limestone is excavated from onsite quarries and is used in the copper recovery circuit as well as for water treatment. The limestone is mined using front-end loaders and loaded into haul trucks. The limestone is crushed in a primary gyratory crusher and fed to a limestone bin. The limestone is ground in a Semi-Autogenous Grinding (SAG) mill followed by a ball mill. There are three lime kilns with an associated lime-slaking ball mill.

The crushed ore is ground in a SAG mill followed by a ball mill. The oversized material from the SAG mill is sent to a pebble cone crusher. The ground ore is sent to a 70-meter diameter thickener.

The thickened ore slurry is pumped to the pressure oxidation circuit. The ore slurry is fed to four autoclaves, where the sulfide minerals are oxidized. Oxygen for the process is supplied from an onsite oxygen plant.

The oxidized ore slurry is pumped to five ceramic-lined hot cure tanks. The slurry is then fed to three 70-meter-diameter Counter-Current-Decant (CCD) thickeners. The overflow from the CCD thickeners is sent to the copper recovery circuit. The solution is treated with limestone and air to increase the pH and precipitate the ferric oxyhydroxides. The treated solution is thickened prior to copper recovery. The copper precipitates as a copper sulfide and is stored in a concentrate stockpile and shipped overseas to smelters.

The ore slurry underflow from the CCD thickeners is sent to the cyanide leaching circuit. The ore slurry is pumped to 11 Carbon-in-Leach (CIL) tanks where cyanide is added to dissolve the gold and silver into solution. Activated carbon is added to adsorb the gold and silver. The loaded carbon is screened and sent to the refinery.

The loaded carbon is acid-washed prior to stripping the gold and silver from the carbon using a strong cyanide solution. The pregnant cyanide solution is piped to 16 electro-winning cells where the gold and silver are recovered as sludge. This sludge is retorted in two retorts to recover mercury naturally present in the ore. The retorted material is fed to a furnace, and the product is a gold-silver doré bar.

The ore slurry tailings from the CIL circuit are sent to a cyanide destruction circuit prior to being pumped to the TSF. In addition, the underflow from the High Density Sludge (HDS) Water Treatment thickener is sent to the TSFs.

The TSF is located in the Lower El Llagal basin and has a storage capacity (both tailings and waste rock) of 249 million tonnes. The solids settle in the tailings impoundment and the decant water is recycled to the mill or water treatment plant using a reclaim barge and pipe system.

It should be noted that there are two existing tailings impoundments from the historic operations: the Mejita Tailings Pond and the Las Lagunas Tailings Pond. Both tailings impoundments are outside the project development area and are the responsibility of the Dominican government or mining concerns not associated with PVDC.

The primary power source for Pueblo Viejo is the Quisqueya 1 Power Plant located on the south coast of the Dominican Republic near the city of San Pedro de Macoris. The plant is a heavy-fuel-oil facility

consisting of 12 generators of 18 megawatt (MW) capacity each for a total plant capacity of 215 MW. There is a 111 km-long double-circuit 230 kilovolt (kV) transmission line from the power plant to the mine. In addition, there is an electrical substation located near Piedra Blanca, which connects to the national electrical supply grid. There are also six stand-by/emergency power generators at the mine, each rated at 2.5 MW for a total of 15 MW.

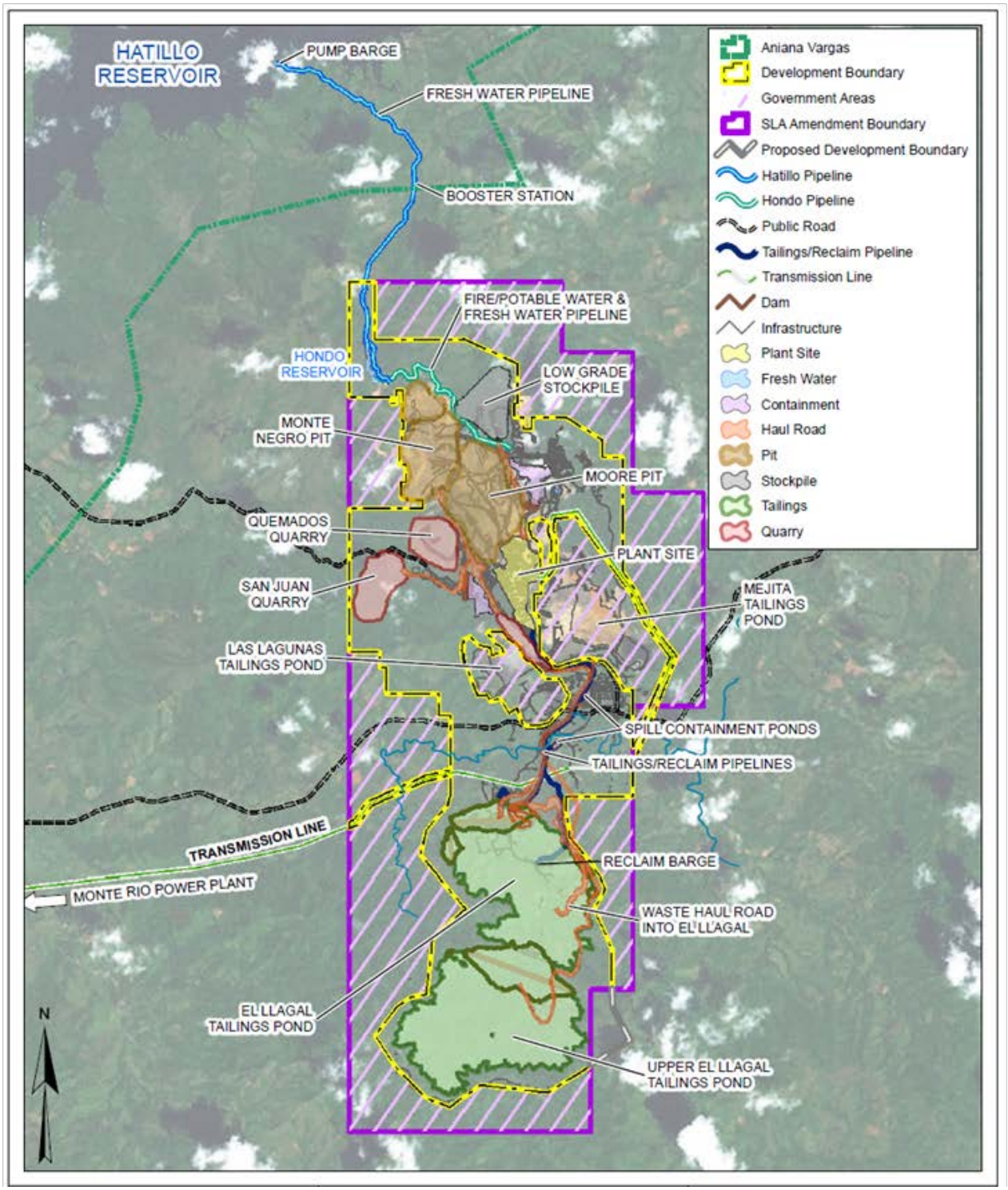


Figure 2: Site Layout

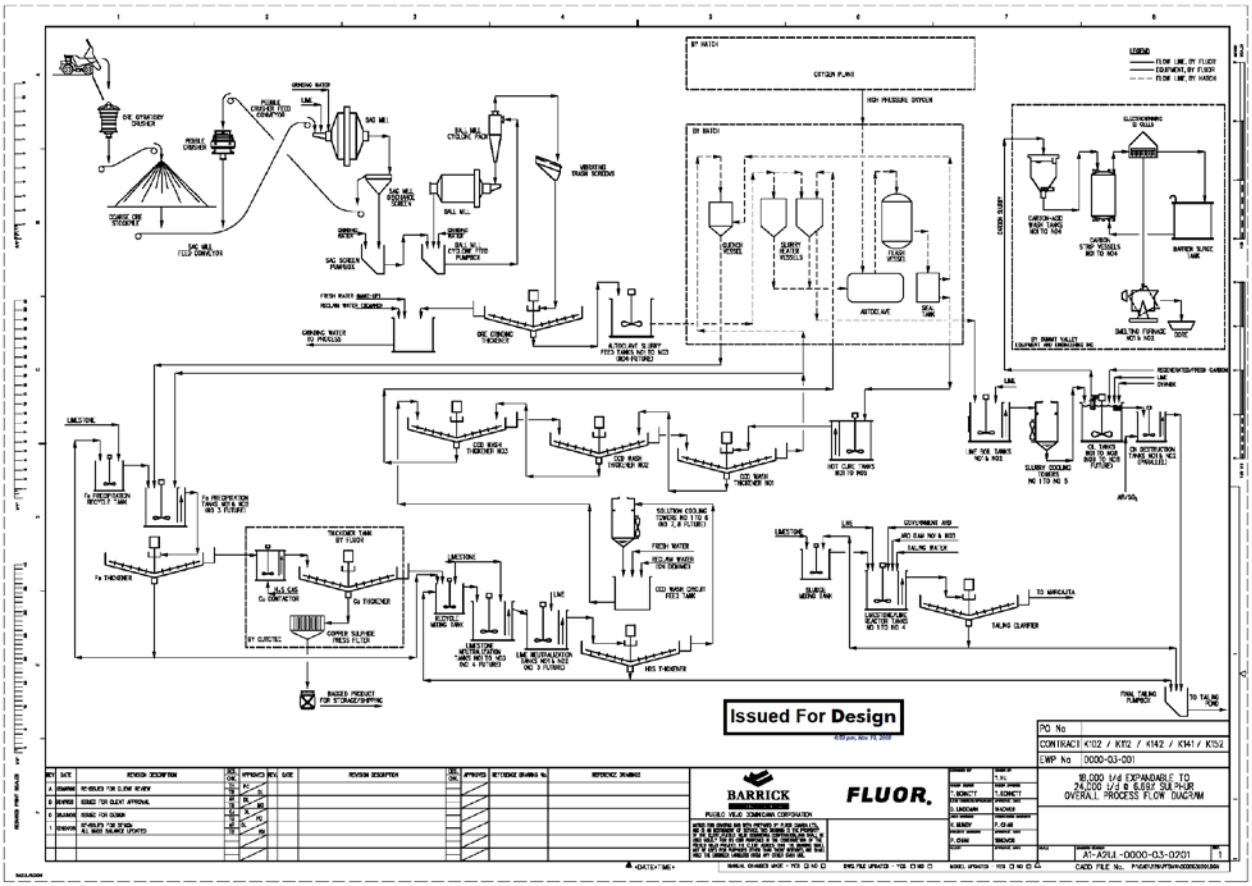


Figure 3: Process Flow Diagram

3.0 SUMMARY AUDIT REPORT

Auditors Findings

Pueblo Viejo Mine is:

☒ **in full compliance with**

☐ in substantial compliance with

☐ not in compliance with

The International Cyanide Management Code

Audit Company: Golder Associates

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

Email: kjohnejack@golder.com

Name of Other Auditors

Name, Position	Signature
Ivon Aguinaga, ICMI Pre-certified Mine Technical Specialist	

Dates of Audit

The Initial Certification Audit was undertaken within five days between October 13 and 17, 2014.

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

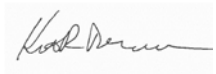
I attest that this Summary Audit Report accurately describes the findings of the verification audit. I further attest that the verification audit was conducted in a professional manner in accordance with the International Cyanide Management Code Verification Protocol for Cyanide Gold Mine Operations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

Pueblo Viejo Mine — Name of Facility

Signature of Lead Auditor

December 18, 2014 — Date

Pueblo Viejo Mine
Name of Facility



Signature of Lead Auditor

December 18, 2014
Date

PRINCIPLE 1 – PRODUCTION

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

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

☒ **in full compliance with**

The operation is ☐ in substantial compliance with **Standard of Practice 1.1**

☐ not in compliance with

Summarize the basis for this finding/deficiencies identified:

The operation is in full compliance with Standard of Practice 1.1, requiring the operation 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.

PVDC contracts with E. I. DuPont de Nemours and Company (DuPont). The term of the contract is March 7, 2011 to December 31, 2016. Section 15.5 of the contract states that PVDC and DuPont agree to comply with the Code. PVDC purchases cyanide that is manufactured at DuPont's plant in Memphis, Tennessee. This facility was most recently recertified under the Code on April 30, 2013. PVDC purchases cyanide only from DuPont; PVDC does not use any independent distributors.

PRINCIPLE 2 – TRANSPORTATION

Protect Communities and the Environment during Cyanide Transport

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

☒ **in full compliance with**

The operation is

☐ in substantial compliance with **Standard of Practice 2.1**

☐ not in compliance with

Summarize the basis for this finding/deficiencies identified:

The operation is in full compliance with Standard of Practice 2.1, requiring that the operation establish clear lines of responsibility for safety, security, release prevention, training and emergency response in written agreements with producers, distributors and transporters.

DuPont is responsible for the supply chain from the plant in Memphis, Tennessee to, and including, the port of Rio Haina in the Dominican Republic. DuPont has contracted with Maritima Dominicana, S.A. (MarDom) for land transportation from Rio Haina to PVDC. DuPont and MarDom have signed a letter with legal validity that establishes clear lines of responsibility and lists the required items under the Code. Exhibit A to the contract between DuPont and MarDom states that contract provisions apply to contracted drivers and leased equipment. Both the DuPont supply chain and MarDom are certified under the Code.

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

☒ **in full compliance with**

The operation is

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

☐ not in compliance with

Summarize the basis for this finding/deficiencies identified:

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

Exhibit A, Scope of Work, to the contract between DuPont and MarDom states the transporter "…shall achieve full compliance under the Cyanide Code and associated certification" and that the transporter

"…shall maintain Cyanide Code compliance, and associated activities, during the entirety of the relationship".

PVDC's transporters are certified under the Code. The DuPont supply chain from the plant in Memphis, Tennessee to, and including, the port at Rio Haina was most recently recertified on January 30, 2014. MarDom was initially certified on January 22, 2013.

PVDC provided bills of lading for cyanide shipments in July and August 2014; no cyanide was shipped in September and October 2014. The bills of lading identify the transporters and ports in the supply chain. All identified transporters are certified under the Code.

PRINCIPLE 3 – HANDLING AND STORAGE

Protect Workers and the Environment during Cyanide Handling and Storage

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

☒ **in full compliance**

The operation is

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

☐ not in compliance with

Summarize the basis for this finding/deficiencies identified:

The operation is in full compliance with Standard of Practice 3.1, requiring that cyanide handling and storage facilities are designed and constructed consistent with sound, accepted engineering practices, quality assurance/quality control (QA/QC) procedures, spill prevention and spill containment measures.

PVDC receives solid cyanide in supersacks that are packed inside Sea-Land containers. MarDom transports the cyanide in a convoy of four trucks, each with one Sea-Land container containing 20 supersacks each. MarDom transports the Sea-Land containers through the PVDC gate and to the nearby transfer building. At this facility, PVDC transfers the supersacks from the MarDom Sea-Land containers to PVDC Sea-Land containers. The containers are then stored inside a fenced area within the overall reagents pad. PVDC transports the Sea-Land containers once or twice per week to the mixing area within the refinery. Three Sea-Land containers are temporarily stored at the mixing area. Supersacks are removed from the Sea-Land containers as needed and mixed in the mixing tank. The reagent grade solution is then transferred to the adjacent storage tank for distribution to the cyanide addition points.

The transfer facility was designed by EPSA LABCO, a consulting company. The mixing area at the refinery was designed by Fluor Canada Inc. (Flour) with the actual design of the mixing tank and storage tank subcontracted to IMECON S.A. and Haug S. A., respectively. The auditors reviewed the issued-for-construction drawings, as well as the punch lists from the turnover packages to verify that these facilities was appropriately designed and constructed. PVDC also provided a letter from DuPont stating the transfer building meets their recommendations and that outdoor storage of the Sea-Land containers is acceptable.

PVDC has located unloading and storage areas away from people and surface water. The transfer building and Sea-Land container storage area are located near the PVDC main gate. The nearest office building is approximately 100 yards away. The mixing area, with temporary storage of several Sea-Land containers, is located within the high-security refinery area at the plant. The nearest office building is approximately 50 yards from the mixing area. There are no surface water bodies or communities near these facilities.

PVDC has installed level sensors in both the mixing tank and storage tank for reagent grade cyanide to prevent overfilling. The auditors observed that these sensors were functioning on the computer screen in the satellite control room at the refinery and reviewed work orders for preventative maintenance to verify compliance.

The mixing and storage tanks are installed on solid concrete bases within concrete secondary containments that prevent seepage to the subsurface and provide a competent barrier to leakage. The auditors reviewed the design drawings for the tank bases and the secondary containments and observed them to be in good condition.

PVDC stores the majority of cyanide in Sea-Land containers at the fenced storage area within the overall reagents pad. PVDC also temporarily stores three Sea-Land containers at the mixing area within the secure refinery. In these two areas, PVDC stores cyanide with adequate ventilation, with minimal potential for contact with water, in a secure area, and separately from incompatible materials as follows: (a) Sea-Land containers are stored outside so that ventilation is not an issue; (b) Sea-Land containers are designed to minimize the potential for water to enter them; (c) Sea-Land containers at the reagents pad are stored within four layers and those at the mixing area are stored within three layers of security, including fencing, guards, limited access, and locks; and (d) Sea-Land containers at the reagent pad are stored separately within a bermed and fenced area, while those at the mixing area are stored separately, except for one other locked Sea-Land container that holds caustic (which is compatible with cyanide because of its high pH).

Standard of Practice 3.2: **Operate unloading storage and mixing facilities using inspections, preventative maintenance and contingency plans to prevent or contain releases and control and respond to worker exposures.**

The operation is

- ☒ **in full compliance with**
- ☐ in substantial compliance with **Standard of Practice 3.2**
- ☐ not in compliance with

Summarize the basis for this finding/deficiencies identified:

The operation is in full compliance with Practice 3.2 requiring that cyanide handling and storage facilities are operated using inspections, preventive maintenance and contingency plans to prevent or contain releases and control and respond to worker exposures.

PVDC receives solid cyanide in supersacks that consist of an outer poly bag lined with cardboard and an inner plastic bag. Each supersack rests on a wooden pallet. PVDC has developed and implemented tracking procedures to ensure the supersacks are not reused. PVDC triple rinses the inner plastic bags and samples the last rinsate for analysis of free cyanide. If the results are greater than 0.5 parts per million (ppm), the bag in question is re-rinsed. All of the components of the supersacks are incinerated at an onsite incinerator; PVDC tracks these components to ensure they are incinerated. The auditors observed rinsing of the inner plastic bags, reviewed the laboratory data for the rinsate, and reviewed the tracking log book to verify compliance. No components are returned to the vendor.

PVDC has developed and implemented procedures to prevent exposures and releases during handling and mixing of the solid cyanide during transfer, transport, and mixing. First, a procedure for transferring the supersacks from MarDom's Sea-Land containers to PVDC's Sea-Land containers at the transfer building describes the safety measures for the process. Second, a procedure for transport of the PVDC Sea-Land containers to the refinery describes the safety measures for this step. Third, a procedure for mixing describes the safety measures for mixing the solid cyanide in the mixing tank. The procedure for mixing describes the operation of valves and tank levels during mixing. The procedure for transport specifies that Sea-Land containers cannot be stacked more than three high. The procedure for mixing requires two operators, plus the involvement of the control room operator via radio and video observation. All three of these procedures describe measures to avoid puncturing or rupturing the Sea-Land containers and/or supersacks, specify PPE, and include cleanup measures. In addition, all three procedures are accompanied by pre-work inspection checklists. The auditors observed the final portion of the transport to the refinery, as well as a mixing event to verify compliance. The auditors also reviewed examples of pre-work inspections to verify compliance.

PRINCIPLE 4 – OPERATIONS

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

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

The operation is

☒ **in full compliance with**

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

☐ not in compliance with

Summarize the basis for this finding/deficiencies identified:

The operation is in full compliance with Standard of Practice 4.1, requiring that the operation implement management and operating systems designed to protect human health and the environment including contingency planning and inspection and preventive maintenance procedures.

PVDC has prepared and implemented management systems, and plans and procedures for all cyanide facilities (i.e., those with 0.5 ppm WAD cyanide or greater). The cyanide facilities are the: transfer building Sea-Land container storage area; temporary storage area for Sea-Land containers at the plant; mixing and storage tank area; CIL area; stripping area; cyanide destruct area; cyanide emergency pond; and the pipes, pumps, sumps, containments, etc. associated with these facilities.

The following are not cyanide facilities because PVDC designed the plant so that they use solutions with less than 0.5 ppm WAD cyanide: milling area, autoclaves, counter-current decantation (CCD) cells, copper sulphide circuit, effluent treatment plant (ETP), high-density sludge (HDS) water treatment plant (WTP), acid rock drainage (ARD) pond #1, ARD pond #3, the tailings storage facility (TSF), pipelines to and from the TSF (slurry and reclaim), and the two pipeline spill ponds.

PVDC provided data during the site visit to demonstrate that the El Llagal TSF had concentrations of WAD cyanide consistently less than 0.5 ppm during the period July to October 2014 and therefore the TSF is not a cyanide facility for the purpose of this initial audit. By extension, the tailings pipeline, reclaim pipeline, and spill ponds along the route are also not cyanide facilities. Tailings are treated to a low level of WAD cyanide (typically less than 5 ppm) with the INCO process prior to mixing with two other non-cyanide effluent streams in the tailings discharge box: effluents from the ETP and HDS WTP. The dilution afforded by mixing these three streams resulted in an average WAD cyanide concentration of 0.13 ppm in the combined stream leaving the tailings discharge box during the period of record of interest. There were a few excursions over 0.5 ppm WAD cyanide, but they were isolated and random

occurrences. The high levels of rainfall reporting to the TSF in the tropical climate provide an additional degree of dilution on reclaim water returned to the ETP for additional (non-cyanide related) treatment.

PVDC has developed written management systems, plans, and procedures for operating the cyanide facilities. The management systems include the Barrick Health and Safety Management System and the Responsibility Information Management System (RIMs). PVDC uses the RIMS software system to implement the overall health and safety management system.

PVDC has developed plans and standard operating procedures (SOPs) describing the standard of practice necessary for the safe and environmentally sound operation of the cyanide facilities, including the specific measures needed for compliance with the Code and regulatory requirements. The plans cover cyanide, water, hazardous materials, rehabilitation, soil, and waste. The SOPs cover logistics, process, maintenance, emergency power, document control, safety, and emergency response.

PVDC has implemented a written procedure to evaluate changes to the cyanide facilities or cyanide activities. Changes must be approved by the functional area supervisors affected by the change, including environmental and safety. The auditors reviewed a complete package for managing the change in the type of cyanide antidote from amyl nitrate to cyanokit to verify compliance.

PVDC has pre-planned contingency procedures in various plans and procedures. The Emergency Response and Management Guide has contingency plans for cyanide and non-cyanide emergencies, such as earthquakes, explosions, chemical spills, cyanide poisoning, terrorism, bomb threats, structural fires, gas inundation, structural failure, hurricanes, and floods. Upsets in the water balance are discussed in the water management plan and temporary closure is covered in the rehabilitation plan. Several cyanide-specific contingency plans are described in SOPs on spill pond management, cyanide gas response, cyanide spill response, and cyanide fire response.

PVDC performs planned general inspections using a written procedure, as well as work area and pre-work inspections, at a frequency sufficient to ensure that cyanide facilities are functioning as designed. Planned general inspections are conducted according to an annual schedule where each area of the plant is visited by a team of three to five supervisors. Work area inspections are conducted by operators on daily to weekly basis. The transfer building and Sea-Land storage area are inspected daily by logistics staff. The mixing, CIL, stripping, and destruction areas are inspected daily by plant operators. The mixing area is also inspected daily by reagent operators for environmental and safety aspects. The TSF, pipelines, and spill ponds are inspected on a weekly basis by tailings operators. Pre-work inspections are conducted each time tasks related to transferring, transporting, and mixing cyanide are undertaken.

PVDC has also implemented programs specifically for: non-destructive testing of vessels and piping; secondary containments; leak detection associated with the release prevention barriers under the CIL and destruct vessels; and structures such as the TSF embankment and spill ponds. The auditors reviewed examples of completed inspection forms and reports to verify compliance.

PVDC ensures that equipment and devices function as intended by a combination of preventative maintenance, redundant equipment, and spare parts. PVDC conducts both scheduled (proactive) and unscheduled (reactive) preventative maintenance and tracks them in an Oracle database. To verify compliance, the auditors selected two pieces of equipment at random to check their maintenance history The auditors also observed redundant pumps in critical applications during the site visit (e.g., at the mixing and storage tanks) and observed an inventory of spare parts in the Oracle database.

PVDC has six backup generators to power pumps and other equipment to prevent unintentional releases and exposures in the event of a power failure. These generators have a total capacity of 15 MW. PVDC maintains and tests the backup generators according to a written procedure on a weekly basis. The auditors observed screenshots of records in the Oracle database to verify compliance.

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

☒ **in full compliance with**

The operation is

☐ in substantial compliance with **Standard of Practice 4.2**

☐ not in compliance with

Summarize the basis for this finding/deficiencies identified:

The operation is in full compliance with Standard of Practice 4.2, requiring that the operation limit the use of cyanide to that optimal for economic recovery of gold so that the waste tailings material has as low a cyanide concentration as practical.

PVDC conducted an exhaustive study to determine the initial optimal gold processing and recovery methods, including cyanide addition in the CIL process. The results were summarized in a 2007 update to the feasibility study. The Pueblo Viejo deposit exhibits five metallurgical ore types. Testing include a bench scale program in the laboratory program and a pilot plant program. The optimal cyanide addition was determined to be 1.0 kilogram per ton (kg/ton) ore.

PVDC has selected a control strategy based on manual sampling of solutions from the CIL Tanks 1, 2, 5, and 11 every 2 hours. The samples are analyzed at the PVDC laboratory. The PVDC cyanide control

philosophy states that there are three conditions that require adjusting the cyanide addition rate: (1) increasing gold in the CIL tailings; (2), high incoming concentrations of cyanide consuming metals (e.g., copper and iron); and (3) high cyanide concentrations after destruction.

PVDC has implemented their selected control strategy and documents adjustments to the cyanide addition rate on the whiteboard in the control room, as well as in the operators log book. The auditors observed photographs of the whiteboard noting the target cyanide levels, as well as target density, pH, and other parameters. The design addition rate of 1.0 kg/ton has been reduced in practice to approximately 0.6 kg/ton, which corresponds to an addition rate of approximately 150 ppm free cyanide at CIL Tank 1.

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

☒ **in full compliance with**

The operation is

☐ in substantial compliance with **Standard of Practice 4.3**

☐ not in compliance with

Summarize the basis for this finding/deficiencies identified:

The operation is in full compliance with Standard of Practice 4.3, requiring the operation to implement a comprehensive water management programme to protect against unintentional releases.

The El Llagal TSF consists of the active lower impoundment and the planned upper impoundment. There are no other facilities at PVDC that would require a water balance. The TSF is a co-disposal facility in that it receives, by design, tailings and waste rock. PVDC provided data during the site visit to demonstrate that the El Llagal TSF had concentrations of WAD cyanide consistently less than 0.5 ppm during the period July to October 2014 and therefore the TSF is not a cyanide facility for the purpose of this initial audit. However, a discussion of the water balance for the TSF is included for completeness.

PVDC has developed a comprehensive and probabilistic water balance for the TSF. The water balance is comprehensive in that it considers the appropriate factors for inflows and outflows. The inflows include the treated tailings; treated effluent from the high-density sludge (HDS) plant for the copper recovery circuit; treated effluent from the effluent treatment plant (ETP) for acid rock drainage; direct precipitation, and runoff from uphill areas. The water balance also includes that volume of waste rock that is placed in the tailings impoundment for co-disposal. The outflows include reclaim water and evaporation. Seepage is not included as an outflow (although it is collected and returned to the impoundment), which is

conservative with respect to predicting water levels. The water balance is also comprehensive in that it considers the effect of dam raises on capacity and freeboard.

The water balance is probabilistic because it considers the 24-hour Maximum Probable Precipitation (PMP) of 650 millimeters (mm), as well as the 200-year, 3-month precipitation of 770 mm. These two events are considered to be simultaneous, meaning the TSF is designed for precipitation of 1,420 mm.

The water balance does not directly model the effects of a power outage on the TSF. In the event of a power outage, all slurry and reclaim water movement to and from the TSF would stop. Therefore, the potential for overtopping the TSF is only a function of the other inflows, which are properly accounted for and tracked in the water balance.

PVDC inspects and monitors the TSF to implement the water balance and prevent overtopping. Water levels are measured daily with an ultrasonic meter and reported daily to management. PVDC inspects the TSF weekly and conducts bathymetric surveys monthly. The engineer of record and an independent third party consultant inspect the facility annually.

PVDC has designed and operated the TSF with a minimum freeboard of 3.5 meters, as determined from the water balance calculations for the PMP and 200-year, 3-month event. The actual freeboard varies, as it is a function of the raise level (which is constantly increasing) and the pond level (which varies). The spreadsheet graphs water level and raise level to ensure that the minimum freeboard is maintained. The water balance is updated monthly.

PVDC operates three precipitation gages around the mine and ARF-03 is located at the northeast corner of the TSF. The auditors obtained precipitation data, as well as a graph comparing the data from the three stations, from 2009 to October 2014 to verify compliance. The actual precipitation values are compared to the forecast values from the initial design on a monthly basis and the model is adjusted as necessary.

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

The operation is

☒ **in full compliance with**

☐ in substantial compliance with **Standard of Practice 4.4**

☐ not in compliance with

Summarize the basis for this finding/deficiencies identified:

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

The only open waters at PVDC are the TSF and the cyanide emergency pond at the plant. PVDC provided time series graphs of analytical data for the spigots and the barge pumps at the TSF. The graph for the spigots showed that concentrations of WAD cyanide exceeded 0.5 ppm on a few isolated occasions, but never exceeded 50 ppm, from January 2013 to September 2014. The graph for the barge pumps in the pool showed that concentrations of WAD cyanide did not exceed 0.5 ppm from January 2013 to September 2014. As an emergency pond that is emptied as soon as practical, the cyanide emergency pond is exempt from the 50 ppm threshold for wildlife protection.

PVDC has not experienced any cyanide-related mortalities in the first three quarters of 2014 and therefore maintaining the WAD cyanide concentration in the TSF at less than 50 ppm has been effective. The auditors reviewed quarterly reports for 2014 to verify compliance.

PVDC does not have a heap leach facility; therefore, the question related to overspray of cyanide solutions is inapplicable.

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

The operation is

☒ **in full compliance with**

☐ in substantial compliance with **Standard of Practice 4.5**

☐ not in compliance with

Summarize the basis for this finding/deficiencies identified:

The operation is in full compliance with Standard of Practice 4.5, requiring the operation implement measures to protect fish and wildlife from direct or indirect discharges of cyanide process solutions to surface water.

PVDC has a direct discharge to surface water in the Margajita River from the ETP. PVDC provided analytical data for the ETP effluent that showed that the concentrations of WAD cyanide did not exceed 0.5 ppm from January 2013 to September 2014.

PVDC has a mixing zone in the Margajita River from the ETP outfall to the Hatillo Reservoir. Surface water monitoring station SW-YNA-30 is the point of compliance where the river enters the reservoir. PVDC provided analytical data for SW-YNA-30 that showed that free cyanide did not exceed the 0.022 ppm from March 2013 to September 2014.

PVDC has a potential indirect discharge to surface water from seepage at the toe of the TSF embankment. PVDC provided analytical data for surface water sampling station SW-TSP-01 that showed that the concentration of free cyanide did not exceed 0.022 ppm from July 2012 to September 2014 with one isolated and minor excursion that occurred well before the period of interest for the initial audit.

PVDC is not engaged in any remedial action related to surface water.

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

The operation is

☒ **in full compliance with**

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

☐ not in compliance with

Summarize the basis for this finding/deficiencies identified:

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

PVDC has implemented measures to protect groundwater. The plant was constructed with concrete floors to prevent seepage and a cyanide emergency pond to contain solutions during upset conditions. The cyanide emergency pond is lined with geomembrane underlain by compacted clay to reduce the potential for seepage. The cyanide destruction circuit at the plant is a key measure to protect groundwater in that the levels of cyanide in the pipelines to and from the TSF, as well as the TSF itself, are so low as to be an unlikely risk to groundwater (see Question 4.1.1). In addition, the pipelines to and from the TSF were installed within a geomembrane-lined ditch with two geomembrane-lined spill ponds. The TSF itself has seepage collection facilities at the toe of the embankment.

The Secretary of the Environment and Natural Resources in the Dominican Republic has designated the groundwater resources to have beneficial uses for domestic, industrial, and agricultural uses with a groundwater protection standard of 0.1 ppm total cyanide. PVDC provided analytical data for its point of compliance wells for that showed no exceedances of the standard for total cyanide in the period preceding the audit. PVDC also provided time series graph for other monitoring wells at the site that showed no exceedances of the standard for total cyanide from January 2010 to September 2014.

PVDC does not have an underground mine where tailings might be used as backfill, nor is PVDC engaged in any groundwater remediation.

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

The operation is

☒ **in full compliance with**

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

☐ not in compliance with

Summarize the basis for this finding/deficiencies identified:

The operation is in full compliance with Standard of Practice 4.7 requiring that the operation provide spill prevention or containment measures for process tanks and pipelines.

PVDC provided a design study by Fluor that showed that the secondary containment routing and sizing for the mixing, storage, barren, CIL, acid wash, stripping, and destruct tanks, columns, and vessels are compliant. The secondary containments for the mixing, storage, and barren tanks flow through to the CIL area. The acid wash and strip vessels have their own secondary containments. The CIL secondary containment, as well as the destruct secondary containment, has sumps to return solutions to the process circuit. Both the CIL and destruct containments also report via pipeline to the cyanide emergency pond, which provides final secondary containment for the plant. The auditors observed the secondary containments to be in good condition.

The flow through secondary containment for the plant reports to the geomembrane-lined cyanide emergency pond that is sized for 110 percent of a single CIL column (i.e., the largest vessel in the plant). A single CIL column has a volume of 5,500 cubic meters (m^3) and the cyanide emergency pond has a volume of 6,000 m^3. There are no cyanide-related tanks, vessels, or columns without secondary containment.

All cyanide-related tanks and vessels are equipped with release prevention barriers that prevent seepage to the subsurface. The mixing, storage, barren, and acid wash tanks are installed on solid concrete bases. The CIL and destruct tanks are installed on ring beams with leak detection systems consisting of sand backfill over a geomembrane liner welded to the ring beam. Each leak detection system is equipped with an outlet valve so that leakage, if any, can be measured and sampled.

PVDC returns solutions in secondary containment to the CIL or destruct circuits via sumps with dedicated pumps. The cyanide emergency pond is equipped with a portable pump to return solutions to the plant. PVDC does not discharge solutions or rainwater in secondary containment to the environment.

PVDC has provided spill containment for all cyanide process pipelines to collect spills and prevent releases to the environment. All reagent grade pipelines and other process pipelines are located over concrete secondary containment within the plant. The HDPE pipelines to the cyanide emergency pond are pipe-in-pipe. The auditors observed all pipelines to be in good condition.

The tailings and reclaim pipelines convey post-destruct solutions with less than 0.5 ppm WAD cyanide. Therefore secondary containment and special protection for river crossings is less important than for pipelines with higher concentration solutions. Nonetheless, PVDC has installed the tailings and reclaim pipelines within a geomembrane-lined channel between the plant and the El Llagal TSF. Similarly, PVDC has constructed geomembrane-lined spill ponds on either side of a creek crossing along the pipeline route. The pipeline crossing over the creek itself is in the same secondary containment channel that is on top of the culverts for the creek. The auditors observed this channel to be in excellent condition.

PVDC has constructed cyanide-related tanks, columns, vessels, and pipelines of stainless steel, carbon steel, and HDPE, all of which are compatible with high pH and cyanide. The auditors observed that all pipes were properly supported and in good condition.

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

☒ **in full compliance with**

The operation is ☐ in substantial compliance with **Standard of Practice 4.8**

☐ not in compliance with

Summarize the basis for this finding/deficiencies identified:

The operation is in full compliance with Standard of Practice 4.8 requiring that operations implement QA/QC procedures to confirm that cyanide facilities are constructed according to accepted engineering standards and specifications.

PVDC has implemented a complete program of construction quality assurance (CQA) for the cyanide facilities. The program was governed by the Fluor Execution Plan that lists the following elements: specifications, CQA plan, observations, testing, reporting, as-builts, punch lists, turnover packages, and acceptance letters. The CQA program was applied mine-wide, but for the purposes of this audit, was specifically applied to the transfer building, mixing and storage area, the CIL area, the stripping area, the cyanide destruct area, and the cyanide emergency pond.

The CQA program consisted of the appropriate elements, such as earthworks, concrete, geomembrane, tanks, and piping. It included field observation and laboratory testing. Reports were signed by the field/laboratory staff and by reviewers to ensure quality. Final turnover packages and acceptance letters were signed by the contractor construction manager and four levels of PVDC management, thus providing evidence of review by qualified personnel that the cyanide facilities were constructed as designed. The auditors reviewed CQA documents, interviewed staff, and reviewed written testimony from engineers present at the time of construction to verify compliance.

Under a written procedure, PVDC has retained CQA records for the cyanide facilities electronically using the LiveLink document control system. The auditors observed this system to retrieve CQA information in use during the site visit.

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

The operation is

☒ **in full compliance with**

☐ in substantial compliance with **Standard of Practice 4.9**

☐ not in compliance with

Summarize the basis for this finding/deficiencies identified:

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

PVDC has developed a written procedure for monitoring surface water, groundwater, potable water, and treated water. The procedure was developed by a geological engineer and a chemical engineer with hydrology and laboratory experience. The procedure includes detailed step-by-step methods for how water samples should be collected, handled, and shipped. The procedure is accompanied by an aerial photograph showing the water sampling locations and a table listing the constituents, number and volume of containers, preservation requirements, and laboratory for analysis suites, including the cyanide species. The procedure includes forms for managing sampling information, including sampling and flow measurement, groundwater level measurement, chain-of-custody, and field equipment calibration. Samples are analyzed at a laboratory in Lima, Peru that is certified for analysis of free, WAD, and total cyanide.

PVDC has developed interim plans for monitoring birds and herpetofauna. PVDC stated that these plans are considered interim because they are still acquiring sufficient observations to validate the methods. The plans were developed by a wildlife biologist.

PVDC monitors surface water and groundwater downgradient of the facilities. For compliance purposes, the surface water monitoring stations are the ETP outfall (ETP-Out) and the mouth of the Margajita River where it enters Hatillo Reservoir (SW-YNA-30). For compliance purposes, the groundwater monitoring wells are GW-LLA-84 and -85 and GW-MRA-30 and -31, although there are other monitoring wells at the site. The water monitoring procedure and its accompanying map describe the program.

PVDC monitors the TSF daily for wildlife and the cyanide emergency pond at the plant monthly. The auditors consider the cyanide emergency pond monitoring adequate given that the pond is adjacent to the plant, is generally empty, and has operators present when solutions are being pumped (as observed by the auditors during the site visit). PVDC has not experienced any cyanide-related mortalities in the first three quarters of 2014, as reported in quarterly reports for 2014.

PVDC monitors surface water on a weekly to monthly to quarterly basis depending on the station. PVDC monitors groundwater on a monthly to quarterly basis depending on the well. The auditors consider these frequencies adequate to characterize these media and detect changes in a timely manner.

PRINCIPLE 5 – DECOMMISSIONING

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

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

☒ **in full compliance with**

The operation is

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

☐ not in compliance with

Summarize the basis for this finding/deficiencies identified:

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

PVDC provided the auditors with their decommissioning plan specifically for their cyanide facilities. The plan considers procedures for decontamination of cyanide-contaminated equipment and cyanide spillages, as well as for cyanide treatment and destruction. The plan also considers procedures for decontamination and decommissioning of infrastructure, and for water and soil monitoring. The plan includes an implementation schedule for the decommissioning activities in terms of years after mine closure. PVDC reviews the decommissioning plan at least every 5 years to incorporate any changes related to decommissioning procedures or facilities. The auditors reviewed the previous version of the plan to confirm that the plan had been updated as required.

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

☒ **in full compliance with**

The operation is

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

☐ not in compliance with

Summarize the basis for this finding/deficiencies identified:

The operation is in full compliance with the Standard of Practice 5.2 requiring that the site establish an assurance mechanism capable of fully funding cyanide related decommissioning activities.

PVDC has developed a cost estimate included in the October 2014 Decommissioning Plan for the implementation of cyanide-related decommissioning activities. This is an estimate that fully funds

completion of the work by a contractor. The auditors verified that the cost estimate was developed based on rates quoted by outside contractors. PVDC updates their cost estimate for the implementation of decommissioning activities on an annual basis in accordance with Barrick corporate requirements. The auditors viewed two previous versions of the cost estimate, one dated December 31, 2013 and the other dated December 31, 2012, and the current version of the cost estimate (October 2014) to confirm that the costs had been updated as required.

PVDC has a current lease agreement of mining rights with the Dominican Republic and other entities. Item 9.5 “Environmental Reserve Fund” of this agreement requires that PVDC have a reserve for closure activities in a bank account in an amount indicated in the agreement. Auditor reviewed the June 13, 2014 statement letter of the bank account called “Pueblo Viejo Environmental Reserve” with Citibank (opened by PVDC to meet the agreement requirements) and verified that the account balance is greater than the October 2014 estimated cost for decommissioning the cyanide-related facilities at PVDC. In addition to this financial mechanism, the auditors reviewed a 2013 letter from McMullen McPhee verifying Barrick Gold Corporation’s conformance with the financial tests for a self-guarantee mechanism.

PRINCIPLE 6 – WORKER SAFETY

Protect Workers' Health and Safety from Exposure to Cyanide

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

☒ **in full compliance with**

The operation is

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

☐ not in compliance with

Summarize the basis for this finding/deficiencies identified:

The site is in full compliance with Standard of Practice 6.1 requiring that the site identify potential cyanide exposure scenarios and take measures as necessary to eliminate, reduce and control them.

PVDC has developed written SOPs and plans that describe the management and operation of the cyanide facilities. The SOPs and plans have been developed to eliminate, reduce and control exposure to cyanide. Individual task specific SOPs provide details for safe operation of the cyanide facilities, PPE requirements and inspection requirements (including pre-work inspections)

Pre-work inspections prior to cyanide unloading, transfer, transportation, and mixing are completed by the logistics and process personnel. Also, inspections of the cyanide facilities are conducted on a regular basis. Inspections include cyanide tanks, pipes, pumps, secondary containments and safety devices (e.g. safety showers, eyewash stations, cyanide kits and fire extinguishers).

PVDC has developed procedures to be used when a facility or operational change/modification is proposed. The procedures consider the involvement of process, maintenance, environmental and safety personnel in the assessment of the proposed changes. All changes are communicated to the workforce and training requirements updated. PVDC has safety meetings to provide information and training to employees as well as to solicit input from employees on worker safety issues related to cyanide. The auditors reviewed change management documentation for the change in the type of cyanide antidote to verify compliance.

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

☒ **in full compliance with**

The operation is

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

☐ not in compliance with

Summarize the basis for this finding/deficiencies identified:

The operation is in full compliance with Standard of Practice 6.2 requiring that the site operate and monitor cyanide facilities to protect worker health and safety and periodically evaluate the effectiveness of health and safety measures.

PVDC monitors and maintains the proper pH to prevent the formation of HCN as recommended in the SOPs. Fixed HCN monitors are installed in areas of potential exposure to cyanide (i.e., the cyanide transfer station, the cyanide mixing and storage area, the CIL area, the carbon screening area, and the cyanide destruction area). In addition, operators use portable HCN meters to conduct cyanide related tasks, maintenance work and confined space related work. HCN sensors are set at 4.7 ppm low level alarm and 10 ppm high level alarm. HCN monitors are maintained, calibrated and inspected as recommended by the manufacturer.

PVDC has monitored HCN to identify the areas of potential worker exposure to cyanide and to confirm the location of the fixed HCN monitors. These HCN monitoring events are conducted on a regular basis as part of an annual Industrial Hygiene (IH) Monitoring Program. Three HCN monitoring events had already been conducted as part of the 2014 IH Monitoring Plan by the time of the site. Results showed HCN values less than 0.5 ppm at the 28 sampling locations.

Warning signs have been placed in areas where cyanide is used to alert workers that cyanide is present, that smoking, eating and drinking are prohibited and that the necessary cyanide-specific PPE must be worn. Pipelines carrying cyanide are marked and the direction of flow is indicated with arrows on the pipe. Signage for confined spaces in tanks has also been placed.

Showers, low-pressure eye wash stations, and dry powder fire extinguishers are located at strategic locations throughout the operation and are maintained, inspected and tested on a regular basis. Showers and eyewash stations were operational. First aid procedures and MSDS are available in the cyanide antidote kits, control room, cyanide transfer station and storage area at the reagents yard and in other main process areas where the cyanide is used. The instructions are in Spanish, the language of the workforce.

PVDC has implemented procedures that require incidents involving cyanide 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.

Verification was conducted by the review of pH and HCN values recorded at the cyanide areas, calibration records of the fixed and portable HCN monitors, inspections records of the emergency safety showers and eyewash stations, completed incident investigation report, as well as by visual observation during the site visit.

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

The operation is

- ☒ **in full compliance with**
- ☐ in substantial compliance with **Standard of Practice 6.3**
- ☐ not in compliance with

Summarize the basis for this finding/deficiencies identified:

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

PVDC has water, oxygen, cyanide antidote kits, automated external defibrillator (AED), radio and telephone in the areas where cyanide is present and in the medical clinic. Cyanide antidote kits include Cyanokit (Hydroxocobalamin), oxygen, and AED. In addition, sodium thiosulfate, resuscitators and two ambulances are also located in the medical clinic. The auditors confirmed that all antidote kits are stored at the correct temperature and that the antidotes have not expired. First aid equipment is inspected regularly. Verification was by visual examination, review of inspection records and interview with process personnel and onsite doctors.

PVDC has developed “Medical Management Guidelines for Cyanide Intoxication”. These guidelines include response procedures for cyanide intoxication including cyanide intoxication symptoms, first aid administration, general emergency measures (such as decontamination), cyanide antidote kit, intravenous administration, medical treatment in a hospital, and transport of a cyanide intoxicated worker to a hospital. In addition, PVDC has developed “Cyanide Response Guidelines” that describe procedures for cyanide intoxication and first aid including exposure routes, signs and symptoms, first aid procedures, oxygen administration, victim removal and decontamination, and the administration of the Cyanokit. PVDC has also developed a procedure for “Cyanide Gas Response” which addresses different response scenarios in the case HCN gas is detected in the process areas.

PVDC has its own onsite medical clinic staffed with at least a doctor, a nurse and a paramedic per shift to provide first aid or medical assistance to workers exposed to cyanide. PVDC has developed procedures to transport workers exposed to cyanide to the local hospitals in Maimon and Santo Domingo for further

medical treatment, if required. PVDC has determined that the hospitals are adequate and have qualified medical staff to respond to cyanide exposures. PVDC doctors have trained the hospital staff in medical treatment for cyanide intoxication in June, July and October 2014. The auditors reviewed a copy of the agreement letters between PVDC and the hospitals well as records of cyanide related medical training received by hospital staff. PVDC conducts cyanide exposure mock drills and tests the relevant emergency procedures on a regular basis.

PRINCIPLE 7 – EMERGENCY RESPONSE

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

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

☒ **in full compliance with**

The operation is

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

☐ not in compliance with

Summarize the basis for this finding/deficiencies identified:

The operation is in full compliance with Standard of Practice 7.1 which requires that the site prepare detailed emergency response plans for potential cyanide releases.

PVDC has developed plans and procedures that address emergency response to potential accidental releases of cyanide. PVDC plans contain procedures for potential scenarios such as: 1) cyanide intoxication; 2) accidents during cyanide transportation; 3) releases during unloading and mixing; 4) release of cyanide during fires and explosions; 5) pipe, valve or tank ruptures; 6) overtopping of ponds; 7) electrical power outages and pump failures; 8) uncontrolled seepage; 9) failure of the cyanide destruction system; 10) cyanide spill control and clean-up; and 11) decontamination and emergency evacuation. The procedures address specific response actions for clearing site personnel from the area of exposure; use of cyanide antidotes and first aid measures for cyanide exposure; decontamination procedures; control of releases at their source and containment; evacuation of affected communities; as well as the assessment, mitigation and future prevention of releases. Verification was by review of these documents and interview with safety and process personnel.

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

☒ **in full compliance with**

The operation is

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

☐ not in compliance with

Summarize the basis for this finding/deficiencies identified:

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

PVDC solicits the input of its workforce and local response agencies (e.g. local hospitals) in the emergency response planning through safety meetings, training sessions and mock drills.

Worker input in developing and evaluating health and safety procedures is via direct communication between supervisors and operators and during daily meetings. In addition, process staff and the Emergency Response Team (ERT) have participated in the cyanide-related mock drills conducted in October 2013 and September 2014. The ERT has participated in the cyanide transportation mock drill conducted in August 2014.

PVDC has made formalized arrangements with three local hospitals (i.e., CISAM, CECIEM and HGPS) to provide assistance to workers exposed to cyanide, if needed. In addition, PVDC has trained the hospital staff in medical treatment for cyanide intoxication in June, July and October 2014. The auditors reviewed records of the training received by the hospital staff.

PVDC has provided training in the "Emergency Action Plan for the Communities" to the local representatives of the Police Departments, Red Cross, Fire Departments, and Civil Defense. These entities would provide support in terms of evacuation, if needed, in case of an emergency. This training was provided in different dates between February and October 2014.

The only accidental cyanide releases that could affect the communities would be from a cyanide transportation accident along the transportation route. Therefore, the communities that could be affected are located along the transportation route in the area of influence of the mine (e.g., Piedra Blanca, Maimon, Tocoa, Las Lagunas and others). PVDC has also provided training in the "Emergency Action Plan for the Communities" to these communities. This training was provided in different dates between February and October 2014. The 'Emergency Action Plan for the Communities" contains procedures to notify local communities including contact information for the leaders of the communities. The auditors reviewed training records and the PowerPoint Presentation on the Emergency Action Plan for the Communities used to provide the training in order to verify compliance.

PVDC keeps a stakeholder contact information list in its emergency response procedures including local Police Departments, Red Cross, Fire Departments, hospitals, Civil Defense and leaders of the different communities. PVDC visits the different communities weekly through their representatives and has meeting with the community representatives on a regular basis. The auditors reviewed records of the 2014 meetings with the communities.

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

☒ **in full compliance with**

The operation is ☐ in substantial compliance with **Standard of Practice 7.3**

☐ not in compliance with

Summarize the basis for this finding/deficiencies identified:

The operation is in full compliance with Standard of Practice 7.3 which requires that the site designate appropriate personnel and commit necessary equipment and resources for emergency response.

PVDC has committed in their emergency response plans and procedures the necessary emergency response equipment and first aid to manage cyanide incidents at the operation and to coordinate transportation to local hospitals for further treatment if necessary. The "Emergency Response and Management Guidelines" document describes the responsibilities and level of authority of the emergency response coordinators of the COE for different site emergency scenarios.

PVDC has identified its ERT and emergency coordinators, and has an updated list of them including their name and contact information in their different emergency response plans (e.g., the "Cyanide Response Guidelines").

PVDC has emergency responders and doctors on-site to respond to a cyanide emergency. Emergency responders are trained first aid, medical treatment related to cyanide, rescue in collapsed structures, HAZWOPER, emergency response equipment, incident command, confined space, hazmat truck, use, firefighting, use and maintenance of self-contained breathing apparatus (SCBA) units, and others. The auditors reviewed the ERT program plan, the ERT training matrix and training records to verify compliance. All emergency response equipment and supplies are inspected on a regular basis (including antidote kits, oxygen tanks, ambulances in the medical clinic, fire extinguishers, hazmat truck including spill response equipment, rescue equipment, chemical protective suits and SCBAs).

PVDC has engaged in consultation with outside local entities (i.e., Civil Defense, Police Departments, Fire Departments, and Red Cross) that would provide evacuation support in case of an emergency, and with local hospital for further medical treatment for cyanide intoxication, if required.

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

☒ **in full compliance with**

The operation is ☐ in substantial compliance with **Standard of Practice 7.4**

☐ not in compliance with

Summarize the basis for this finding/deficiencies identified:

The operation is in full compliance with Standard of Practice 7.4 which requires that the site develop procedures for internal and external emergency notification and reporting.

The emergency response plans detail the procedures including current contact telephone numbers for internal (i.e., PVDC management, ERT and emergency response coordinators) and external emergency notification (i.e., cyanide transporter, local hospitals and other local entities and the media).

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

☒ **in full compliance with**

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

☐ not in compliance with

Summarize the basis for this finding/deficiencies identified:

The operation is in full compliance with Standard of Practice 7.5 which requires that the site incorporate in response plans and remediation measures monitoring elements that account for the additional hazards of using cyanide treatment chemicals.

PVDC has prepared cyanide spill response procedures for potential cyanide releases. These documents include emergency response procedures to address the management of contaminated soils and describe what final cyanide concentration will be allowed in residual soil as evidence that the release has been completely cleaned up. Soils samples would be taken following clean-up to confirm complete removal of all cyanide contaminated materials. PVDC has developed plans to sample and monitor soils and groundwater in the event of a cyanide spill.

PVDC does not consider the use of chemicals to treat cyanide that has been released into surface waters. PVDC has a cyanide emergency pond to contain releases from the plant, but in the unlikely event of a release that might affect community water supply sources used by the communities located downgradient of the process facilities, bottled water will be distributed to the communities, if needed.

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

☒ **in full compliance with**

The operation is ☐ in substantial compliance with **Standard of Practice 7.6**

☐ not in compliance with

Summarize the basis for this finding/deficiencies identified:

The operation is in full compliance with Standard of Practice 7.6, which requires that the site periodically evaluate response procedures and capabilities and revise them as needed.

PVDC evaluates and updates its cyanide related emergency response procedures and plans on a regular basis and following mock drills and actual incidents as needed. PVDC conducts mock emergency drills based on likely cyanide release/exposure scenarios to test the response procedure, and incorporates lessons learned from the drills into its response planning. Mock drills are conducted on a regular basis. The auditors reviewed documentation related to the three cyanide-related mock drills conducted by PVDC, as well as revisions made to the cyanide related emergency response procedures and plans in order to verify compliance.

PRINCIPLE 8 – TRAINING

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

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

The operation is

☒ **in full compliance with**

☐ in substantial compliance with **Standard of Practice 8.1**

☐ not in compliance with

Summarize the basis for this finding/deficiencies identified:

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

PVDC provides initial training and refresher training to all employees and contractors, with the potential to be exposed to cyanide, on cyanide hazard recognition, cyanide first aid treatment, and spill response. The training is provided in three different levels depending on the potential level of exposure of each employee. PVDC retains all cyanide training records including test results demonstrating an understanding of the training. Verification was by interview with process and training personnel, random interviews to operators and review of employee training materials and records

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

The operation is

☒ **in full compliance with**

☐ in substantial compliance with **Standard of Practice 8.2**

☐ not in compliance with

Summarize the basis for this finding/deficiencies identified:

The operation is in full compliance with Standard of Practice 8.2 which requires that the site train appropriate personnel to operate the facility according to systems and procedures that protect human health, the community and the environment.

All personnel in job positions that involve the use of cyanide and cyanide management (including unloading, mixing, transfer, transportation, production and maintenance) receive training on how to perform their assigned tasks with minimum risk to worker health and safety. Individual training is provided for each specific task an operator will perform related to cyanide management. Task specific SOP training is provided prior to working with cyanide independently. The SOPs include the objective of the

SOP, photos of the task/activity to be conducted, the required PPE, and the individual task specific steps. Verification was through review of task specific records and random interviews to cyanide operators to verify compliance.

The auditors reviewed the training matrices developed for the different process areas that are used to track the training provided. These matrices include the name of the employees for each process area, the required SOPs, the date of training, and the test results. Auditors also reviewed a copy of the Process Plant, New Employee Training Program including a module in Cyanide Safety.

Task specific training to operators is provided by various process supervisors who have several years of experience in the mine process. General training related to cyanide management is provided by the Training Supervisor who is certified as a Technical Training and Development Facilitator from INFOTEP.

PVDC requires and provides refresher training on cyanide management annually (as part of Level 1-3 Training Program) and in task specific SOPs on regular basis to ensure that employees continue to perform their jobs in a safe and environmentally protective manner. Refresher training in task specific SOPs is provided by supervisors through daily meetings. PVDC requires written tests to evaluate the effectiveness of cyanide training and those training records are retained throughout an individual's employment, documenting the training received. The records include the name of the employee and the trainer, the date of training; the topics covered, and test results demonstrating an understanding of the training materials.

Verification was through review of task specific records and random interviews to cyanide operators to verify compliance. The auditors also reviewed the training matrices developed for the different process areas tracking the training provided. These matrices include the name of the employees for each process area, the required SOPs, the date of training, and the test results. The auditors also reviewed a copy of the Process Plant, New Employee Training Program including a module in Cyanide Safety.

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

The operation is

☒ **in full compliance with**

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

☐ not in compliance with

Summarize the basis for this finding/deficiencies identified:

The operation is in full compliance with Standard of Practice 8.3 which requires that the site train appropriate workers and personnel to respond to exposures and environmental releases of cyanide

Personnel responsible for cyanide unloading, transfer, transport processing and maintenance are trained in procedures to be followed if cyanide is released, as well as in decontamination and first aid procedures. This training is provided as part of the Level 3 cyanide training. This training covers cyanide antidote kits, spill control, conditions to be considered to respond to spills, HCN gas release, responsibilities of the employees, supervisors and the control room, response actions in case of solid and liquid cyanide spills, decontamination, required PPE, and final disposal of contaminated soil and clean-up materials.

PVDC emergency coordinators and responders are trained in the procedures described in the "Cyanide Response Guidelines", which describes different potential cyanide emergency scenarios. PVDC response personnel receive refresher courses in cyanide first aid treatment, HAZWOPER, decontamination and remediation procedures for cyanide related exposures and releases. PVDC has made local response agencies (e.g., local hospitals, Civil Defense, Fire and Police Departments, Red Cross and communities) familiar with those elements of their cyanide emergency response plan related to cyanide through training sessions and meetings.

PVDC conducts cyanide related mock drills based on likely release/exposure scenarios. Mock drills are evaluated from a training perspective to determine if personnel have knowledge and skills required for effective response.

Training records are retained and 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. Verification was through interview with training personnel and review of training records.

PRINCIPLE 9 – DIALOGUE

Engage in Public Consultation and Disclosure

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

☒ **in full compliance with**

The operation is

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

☐ not in compliance with

Summarise the basis for this finding/deficiencies identified:

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

PVDC has an open-door policy. PVDC conducts community meetings and training workshops on cyanide use and management on a regular basis. Workshops involved local communities located in the area of influence of the mine. PVDC has three community offices located at the mine, in Maimon and in Cotui. Stakeholders can visit these community offices to obtain information about the mine, communicate their concerns, and request a site tour. The auditors reviewed records of the visits conducted by the members of different communities in August, September, and October 2014. The purpose of the visits was in most of the cases to request information.

PVDC Social Responsibility personnel also visit the communities located in the area of influence of the mine on a weekly basis. During these visits, PVDC has provided an induction training presentation on cyanide management including information of the cyanide use in the different process areas of the mine and procedures for the communities in case of a cyanide-related emergency (i.e., notification and evacuation assistance procedures). The training has been provided to more than 20 communities in the area of influence of the mine.

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

☒ **in full compliance with**

The operation is

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

☐ not in compliance with

Summarize the basis for this finding/deficiencies identified:

The operation is in full compliance with Standard of Practice 9.2 which requires that the site initiate dialogue describing cyanide management procedures and actively address identified concerns.

PVDC has an open-door policy and has developed opportunities to interact with stakeholders and provide them with information regarding cyanide management practices and procedures.

PVDC has three community offices located at the mine, in Maimon and in Cotui. Stakeholders can visit these community offices to obtain information about the mine, communicate their concerns, and request a site tour. PVDC Social Responsibility personnel also visit the communities located in the area of influence of the mine on a weekly basis. During these visits, PVDC has provided an induction training presentation on Cyanide Management including information of the cyanide use in the different process areas of the mine and procedures for the communities in case of a cyanide-related emergency (i.e., notification and evacuation assistance procedures). The training has been provided to more than 20 communities in the area of influence of the mine.

Since 2013, PVDC has implemented a Community Water Monitoring that includes the sampling of several points downstream in the Margajita River. Cyanide is analyzed as part of this monitoring. This monitoring is conducted with the participation of 18 communities.

PVDC has provided training in the "Emergency Action Plan for the Communities" to local representatives of the Police Departments, Red Cross, Fire Departments, and Civil Defense. These entities would provide support in terms of evacuation, if needed, in case of an emergency.

PVDC provides public site tours that include a visit to the process areas and a discussion of the mine process. During the site tours, stakeholders have the opportunity to raise issues of concern and a variety of personnel are available to answer questions.

Verification was by an interview with the Social Responsibility Coordinator and the review of meeting, tour and training workshop records.

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

The operation is

- ☒ **in full compliance with**
- ☐ in substantial compliance with **Standard of Practice 9.3**
- ☐ not in compliance with

Summarize the basis for this finding/deficiencies identified:

The operation is in full compliance with Standard of Practice 9.3 which requires that the site make appropriate operational and environmental information regarding cyanide available to stakeholders.

PVDC provides information on cyanide in written format (e.g., pamphlet and articles in the Somos Barrick Magazine) and oral form (i.e. community workshops and site tours). The auditors reviewed records of the training workshops provided to the communities in 2014, including videos of the training sessions and the PowerPoint presentations, to verify compliance.

A pamphlet on "Myths and Realities, All You Need To Know About Cyanide" has been distributed to workers and local communities during visits to the communities and workshops. The pamphlet includes information on natural forms of cyanide, cyanide use at the site, types of cyanide accidents that have occurred in the mining industry, cyanide management at Barrick, the Code, how the extraction process of the gold is conducted using cyanide, cyanide degradation, use and treatment of water used in the extraction process, and others. The auditors reviewed a copy of the pamphlet.

PVDC also provides a presentation on the INCO process and distributes a magazine on "What Do You Know About Cyanide" as part of the site tours. These documents describe the use of the cyanide in the gold extraction process and the INCO process for cyanide destruction.

PVDC has published articles about the cyanide management at the site in the Somos Barrick Magazine (Cyanide in Mining" in April 2012 and Communities Know About the Cyanide Management at Pueblo Viejo" in May 2014). This magazine is distributed to stakeholders (such as communities and government entities).

A cyanide exposure or release will be reported to regulatory agencies, as required by the PVDC Environmental License (DEA No. 101-06-Modificada), within the corresponding regulatory timeframe. Information on cyanide exposures and releases that will be submitted to the regulatory agencies would be information available to the public. PVDC has not had any reportable cyanide release or exposure incidents.

Report Signature Page

GOLDER ASSOCIATES INC.

Kent Johnejack
ICMI Lead Auditor and Mining Technical Specialist

Ivon Aguinaga
ICMI Mining Technical Specialist

Date: December 18, 2014

KJ/IA/rt

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Africa	+ 27 11 254 4800
Asia	+ 852 2562 3658
Australasia	+ 61 3 8862 3500
Europe	+ 356 21 42 30 20
North America	+ 1 800 275 3281
South America	+ 56 2 2616 2000

solutions@golder.com
www.golder.com

Golder Associates Inc.

4730 N. Oracle, Suite 210

Tucson, AZ 85705

Tel: (520) 888-8818

Golder Associates

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