SUMMARY AUDIT REPORT

for the May 2013
International Cyanide Management Code Certification Audit

Prepared for:
Tüprag Metal Madencilik Sanayi ve Ticaret AS
Eldorado Gold Corporation/ Kişladağ Gold Mine

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

FINAL
November 15, 2013

ENVIRON International
901 5th Avenue, Suite 2820
Seattle, Washington 98164
www.environcorp.com
SUMMARY AUDIT REPORT

Name of Mine: Kışladağ Gold Mine

Name of Mine Owner: Eldorado Gold Corporation

Name of Mine Operator: Tüprag Metal Madencilik Sanayi ve Ticaret AS (Tüprag)

Name of Responsible Manager: Mr. Metin Demir, General Manager

Address: Kışladağ Gold Mine
Tüprag Metal Madencilik San.Tic.A.Ş
Gümüşkol Köyü Mevkii PK: 30 Ulubey
Uşak
Turkey

Telephone: +90 276 413 0000/201
Fax: +90 276 413 0030

E-mail: metind@kisladag.com

Location detail and description of operation:

The Kışladağ Gold Mine is the largest operating gold mine in Turkey. It is located in west-central Turkey in Usak Province, on the western edge of the Anatolian Plateau between the major cities of Izmir, lying 180 km to the west on the Aegean coast, and the capital city of Ankara, 350 km to the northeast. The site is 35 km southwest of the provincial capital of Usak, near the village of Gümüşkol and several other small villages and hamlets. The site is situated at an elevation of approximately 1,000 m above sea level, in gently rolling topography. The climate is temperate with an average annual rainfall of 425 mm, most of which occurs during the winter months. The surrounding region is rural, characterized primarily by subsistence farming and grazing. Access to the mine is provided by a 5.3 km long paved mine access road, which connects to a paved regional highway between the towns of Ulubey and Esme. Electricity is provided from the national grid via a 25 km power line, and water for the operation is pumped from wells to the site through a 13 km pipeline.

Construction began in 2004 and was completed in 2006. Commercial gold production commenced in July 2006. The mine’s current throughput production is 12.5 million tonnes/yr. Gold production in 2012 was 289,300 oz.
Kişladağ ore is processed in a conventional heap leach operation. Crushed and screened ore is transported to the heap leach pad by a series of overland conveyors, and placed on the pad using a radial stacker. The designed heap height is 60 m, which is placed in 10 m lifts. The heap leach pad is a permanent facility employing a two part liner system of a compacted layer of low permeability clay soil and a synthetic liner. Solution is managed using pregnant, intermediate, and barren solution ponds and the ADR plant. The water management system includes a large event pond, and the overall system has been designed to manage precipitation in excess of a 100 year, 24 hour storm event. Gold from the heap solutions is loaded onto activated carbon in the ADR plant and recovered from the carbon in a standard Zadra process, consisting of pressure stripping, electrowinning, and smelting. The final product is a gold doré ingot suitable for final refining.

It should be noted that until earlier this year, ore concentrate from the Efemçukuru mine (located approximately 180 km from Kişladağ) was trucked to the site for processing at the Kişladağ Concentrate Treatment Plant (KCTP). This plant had been taken out of service at the time of the audit, however, and is not scheduled to be re-commissioned in the foreseeable future. Therefore, except for a cyanide storage warehouse which remains in use, the KCTP was not included in the scope of this audit.

The general location of the Kişladağ mine is show in the following figure.
SUMMARY AUDIT REPORT
Auditors’ Finding

The operation is: ■ in full compliance
↓ in substantial compliance
↑ not in compliance

with the International Cyanide Management Code.

Audit Company: ENVIRON International Corp
901 5th St., Suite 2820
Seattle, Washington 98164
USA

Audit Team Leader: Glenn Mills, EP(CEA)
e-mail: gmills@environcorp.com

Names and Signatures of Other Auditors

John Lambert, EP(CEA)

Ata Utku Akcil, PhD

Date(s) of Audit: May 27 – May 31, 2013

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 Gold Mine Operations and using standard and accepted practices for health, safety and environmental audits.
SUMMARY AUDIT REPORT

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
   ▼ in substantial compliance
   ▼ not in compliance…with Standard of Practice 1.1

Discuss the basis for this Finding/Deficiencies Identified:

Tüprag purchases cyanide exclusively from CyPlus GmbH (CyPlus), Hanau-Wolfgang, Germany, under a master supply (cyanide production and delivery) contract. Purchase Orders (POs) are periodically issued against the contract that specify cyanide delivery form(s) and the specific quantities to be delivered. The master contract recognizes the commitment of both parties to obtain and maintain ICMC certification, and the requirement extends to the CyPlus transportation subcontractors. CyPlus obtained ICMC certification for its supply chain to Turkey in September, 2012. Review of that certification indicates that all cyanide originates with the CyPlus production facility in Wesseling, Germany. The Wesseling facility was originally certified to the ICMC in 2006, and was recertified in October, 2012.

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

Standards 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.

The operation is: ■ in full compliance
   ▼ in substantial compliance
   ▼ not in compliance…with Standard of Practice 2.1.

Discuss the basis for the Finding/Deficiencies Identified:

Kışladağ Gold Mine
Name of Mine

Signature of Lead Auditor

November 15, 2013
Date

Page 5 of 41
Review of the CyPlus Sodium Cyanide Supply Agreement indicates the CyPlus and its transportation contractors are responsible for production and delivery of cyanide in full compliance with the ICMC. Tüprag takes ownership of the cyanide on site at the point the sea-containers are lifted from the delivery truck (for cyanide in “bag-in-box” form) at the ADR and KCTP cyanide storage warehouse, or at the point in time that solid-to-liquid-system (SLS) delivery/mixing tanks are delivered to the dedicated SLS tank storage warehouse. Packaging requirements are addressed in detail in the Supply Agreement, and it is clear that although requirements for unloading reside with Tüprag, all other responsibilities are held by the CyPlus Turkey supply chain. CyPlus’s Turkey Supply Chain is comprised of:

- the CyPlus Wesseling production facility [assisted by Loxx Holdings GmbH (Loxx), contracted to manage the entire supply chain on CyPlus’s behalf];
- truck transport to the Container Terminals at the Ports of Hamburg or Bremerhaven, Germany by Frisch Spedition und Transport GmbH & Co [managed for Loxx and CyPlus by Transfracht Internationale Gesellschaft für kombinierten Güterverkehr mbH &Co (TFG)];
- ocean transport by Mediterranean Shipping Company(MSC) to Izmir, Turkey;
- Limar Port and Ship Operators (Limar), the operating contractor for the Port of Izmir;
- Ayhan Nakliyat Transportation Company (Ayhan Nakliyat), responsible for transportation of cyanide from the Port of Izmir to the mine site; and
- Meke Environmental Protection Services Ltd (Meke), contracted to CyPlus to provide emergency response assistance and support to Ayhan Nakliyat, including provision of a fully equipped Emergency Response Team (ERT) to accompany each shipment.

2.2 Require that cyanide transporters implement appropriate emergency response plans and capabilities, and employ adequate measures for cyanide management.

The operation is: ■ in full compliance
   † in substantial compliance
   † not in compliance…with Standard of Practice 2.2.

Discuss the basis for the Finding/Deficiencies Identified:
Review of the CyPlus Sodium Cyanide Supply Agreement indicates the CyPlus and its transportation contractors are responsible for production and delivery of cyanide in full compliance with the ICMC.

Chain of custody records were available from the Port of Izmir to the mine site that confirm Ayhan Nakliyat as the road transporter, MSC as the ocean transporter, and CyPlus as the original producer. Upstream chain of custody records/bills of lading between Wesseling and the Ports of Hamburg or Bremerhaven are not provided to Tüprag. However, review of the ICMI website indicates that the entire CyPlus Turkey supply chain has been certified. SARs posted for individual firms in the supply chain all have been determined to be in full compliance with respect to having systems in place for tracking shipments to prevent losses in transport.

3. HANDLING AND STORAGE

Protect workers and the environment during cyanide handling and storage.

Standards of Practice

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

The operation is: ■ in full compliance
in substantial compliance
† not in compliance…with Standard of Practice 3.1.

Discuss the basis for this Finding/Deficiencies Identified:

Cyanide is currently being purchased from CyPlus as dry briquettes, in two different delivery forms: (a) 1-tonne non-returnable polypropylene bags, with internal polyethylene moisture barriers, overpacked in reusable palletized plywood crates; and (b) reusable SLS container tank trailers, which serve as both delivery and mixing containers. All briquettes are delivered buffered with sodium hydroxide to maintain high pH in mixing operations and thereby reduce the potential risk of hydrogen cyanide (HCN) gas generation. The “bag-in-box” form is currently the form in regular use, although plans are place to provide up to 80% of all required cyanide in the SLS form. Several SLS container trailers had been received onsite for testing purposes, however, and a new, dedicated warehouse had been constructed on the access road due south of the ADR for onsite storage of SLS trailers. However, the mixing, offloading, and storage facilities and associated infrastructure for the SLS form had not be completely constructed at the time of the audit, and as the full SLS mixing and storage system had not been commissioned, it is considered to be beyond the scope of this audit. The auditors focused on the ICMC issues associated with receiving, handling, storage, and mixing of...
cyanide in the “bag in box” delivery form. Tüprag management confirmed that both delivery forms will likely be required over the life of the mining operation.

Cyanide receiving and storage areas are designed and constructed to sound practices. Steel intermodal “sea-containers” containing 20 one-tonne boxes of cyanide are routinely delivered to a secure, dedicated warehouse adjacent to the ADR. Intermodal containers are lifted from the trailer using contracted mobile cranes. Reserve stocks are stored at another dedicated cyanide warehouse at the KCTP. Both warehouses are secured, fully enclosed, and -roofed, with concrete containments, HCN alarms, and dry chemical fire extinguishers. Oldest stocks of cyanide are used first.

Cyanide mixing and storage tanks are located within a concrete containment a short distance from the cyanide storage building and well within the security perimeter of the site. The mixing and storage area, the gold room, stripping vessels, other reagent storage tanks, and other major components of the ADR are open to the atmosphere, but under a common metal roof. The acid storage and wash tanks are located within a physical separate bermed concrete containment within the ADR footprint.

Cyanide bags are removed from boxes using a dedicated jib crane and positioned over a steel hopper, bag cutter, and mechanical ventilation arrangement installed on the top of the mix tank. The hopper had been retrofitted with a partial (three-sided) steel shroud which served to position the bag prior to cutting. However, sizing of the hopper and the effectiveness of the cutting arrangement was not optimal, requiring time and substantial care on the part of the mixing deck operator to prevent overflow of briquettes onto the mixing deck. However, subsequent to the audit and prior to the submittal of this report, Tüprag commissioned a complete redesign and replacement of the hopper and bag cutter assembly. A new hopper with fully enclosed steel cabinet and improved four-bladed cutter assembly was constructed. The cabinet arrangement permits full enclosure of the bag prior to being lowered onto the cutter assembly. A tempered glass viewing port was provided for the operator, who is able to shake the empty bag using the jog function of the bag hoist. A combination safety eyewash and shower was also added to the mixing deck. Engineering drawings and multiple photographs of the complete modifications as well as mix events in progress were provided for review; in the audit team’s judgment, these modifications were designed and constructed to a high standard of quality, substantially reduce the exposure risk to the operator, and justify a finding of full compliance for this standard of practice.

Empty (cut) cyanide bags are required to be disposed of as hazardous waste. A risk assessment had been performed by Tüprag to determine the safest method of disposal. If the bags were rinsed with water after the mix, there was a concern over the potential for HCN generation in potentially undrained corners of the bag interior. Tüprag’s practice is therefore to fold and roll the empty dry bag on the mixing deck without rinsing, immediately after completion of the cut and deposition of briquettes in the mixing tank.
Washdown of the mixing deck and hopper occurs after the rolled bag is removed. Empty bags are accumulated in dedicated waste containers (covered plastic barrels) pending offsite shipment.

The current cyanide mixing and storage tanks are fitted with tank level indicators and alarms that can be monitored from the ADR control room. It is understood that the new SLS storage tanks will be provided similar alarms. The tanks are located within an area bunded with bermed concrete knee walls, with interconnecting concrete floor drains that report to a concrete sump on the west side of the second carbon train. Several minor cracks were noted in concrete bund areas during the audit which were repaired by Tüpraş prior to the submittal of this report. Photographic evidence of satisfactory completion of all repairs was provided to the auditors for review prior to report completion, along with updated operator inspection checklists emphasizing completion of checks for containment integrity on a per shift basis.

Dry briquette warehouses at the KCTP and ADR are both provided mechanical ventilation arrangements; the cyanide storage tank in the ADR is under a roof, but is otherwise open to the atmosphere. Warehouse storage prevents contact with water; the warehouses are secured, fully enclosed, and metal-roofed, with concrete containments, hydrogen cyanide (HCN) alarms, and dry chemical fire extinguishers. They are well within the security perimeter of the project; they both have locked doors and are located within secondary security fencing with locking gates.

Apart from cyanide storage, the only permitted storage function of the ADR and KCTP warehouses is the storage of knocked-down wooden cyanide boxes pending shipment back to CyPlus in Germany.

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

The operation is: ■ in full compliance
in substantial compliance
↓ not in compliance…with Standard of Practice 3.2.

Discuss the basis for this Finding/Deficiencies Identified:

All sea-containers used for the transportation of cyanide boxes are inspected after cyanide crates are removed, and released for other service. The plywood boxes are designed to be knocked down when empty, folded, and returned to CyPlus’s Wesseling plant for re-use. Folded boxes are accumulated in the cyanide warehouse until enough boxes have been accumulated to fill a sea-container, at which point they are shipped...
back to Germany. Empty (cut) cyanide bags are disposed of as hazardous waste. A risk assessment had been performed by Tüprag to determine the safest method of disposal. If the bags were rinsed with water after the mix, there was a concern over the potential for HCN generation in potentially undrained corners of the bag interior. Tüprag’s practice is therefore to fold and roll the empty dry bag on the mixing deck without rinsing, immediately after completion of the cut and deposition of briquettes in the mixing tank. Washdown of the mixing deck and hopper occurs after the rolled bag is removed. Folding is performed by the mixing tank operator, wearing full protective gear (including nitrile gloves and respiratory protection). The folded bag is reduced to a small bundle, which is then transferred to an empty, dedicated plastic waste barrel. Barrels are labeled as hazardous waste, secured with fitted plastic lids, and retained in a controlled area adjacent to the ADR pending shipment offsite to a permitted hazardous waste disposal facility.

Tüprag has developed a CMP for the operation, as well as a safe work procedure that governs the cyanide mixing operation, which was updated (and affected operators re-trained) after completion of the mixing tank modifications discussed in 3.1 above. Other procedures address the safe handling of intermodal containers as they are unloaded from the delivery trailer, as individual cyanide boxes are removed from the container, and as cyanide boxes are stored in the warehouse. Procedures limit stacking of individual cyanide boxes within the warehouse to three high and provide direction on: the cleanup of spills of dry briquettes that may occur in the mixing operation; personal protective equipment (PPE) requirements (full Tyvek coveralls, rubber gloves and boots, and full-face respirator); and requirements for a separate observer in identical PPE at ground level during the mix. In addition, a remotely monitored video camera is trained on the mixing facility.

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

Standards of Practice

4.1 Implement management and operating systems designed to protect human health and the environment including contingency planning and inspection and preventive maintenance procedures.
The operation is: ■ in full compliance 
[ ] in substantial compliance 
[ ] not in compliance…with Standard of Practice 4.1.

Discuss the basis for the Finding/Deficiencies Identified:

Tüprag’s ICMC compliance program is led by its Health, Safety, and Security (HSS) department, with the assistance of the Environmental, Process, Preventive Maintenance, and other operational departments. A CMP has been developed that is supported by a cyanide training plan, a training and drill plan for the fire and rescue team, and a comprehensive suite of safe work procedures; it establishes overall requirements for:

- cyanide procurement and transport;
- unloading, handling, and storage;
- cyanide mixing operations;
- management of leach pad construction, ore placement, and placement of leach solution drip-lines;
- leach pad leak detection monitoring;
- management of solution collection trenches and pipelines;
- management of pregnant, barren, and intermediate solution ponds; and
- management of stormwater event ponds.

Tüprag has also developed an environmental management system (EMS) based on ISO 14001, and it is understood that the practices embodied in the CMP will be developed by the HSS department into a comprehensive OHSAS 18001-based occupational health and safety management system over the next year.

Heap leach operations are conducted in compliance with the CMP, the technical guidance provided in final phase-specific design reports, and by regular review of the site water balance; see 4.3 and 4.8 below. All operational assumptions and parameters (including required freeboard in the solution, stormwater, and emergency ponds) are documented in phase-specific design reports for the heap leach pad and the site’s water balance model. Kışladağ is purely a heap leach operation, and does not use mill based mineral extraction and tailings technology.

Operations personnel conduct documented inspections on each shift using an annotated form which addressed key aspects of ADR operations as well as the condition/available freeboard in the solution ponds and event ponds, monitoring for the adequacy of birdball coverage in the barren solution pond, monitoring of the leach pad leak detection ports or potential ponding on the leach pad or in the solution collection trenches, integrity of bird netting on the pad discharge collection basins, spill management reagent expiry dates, the integrity of the hydrogen peroxide dosing system, and other aspects of cyanide management. In addition, operations supervisors conduct daily inspections that
consider general housekeeping, fire safety, machinery safety, adequacy of signage, ventilation, environmental issues, and other concerns, using an annotated. The HSS Department also conducts monthly documented inspections of all cyanide facilities.

Tüprag also has a robust SAP software-based preventive maintenance (PM) system that encompasses major machinery, tanks, pumps, valves, sensors, and other equipment involved in the management of cyanide (the exception being fixed and hand-held HCN monitors, calibration and maintenance of which is provided by the H&S department). Tüprag has also developed a procedure under its EMS that applies to the evaluation of the environmental and safety impacts of new or modified processes, equipment, or materials. The proposed change is documented on and routed to the HSS Manager and Environmental Manager for review and approval prior to the implementation of any such changes. The procedure applies in addition to the Authorization for Expenditure (AFE) process, which is required for major capital expenditures that must be conducted outside of regular annual budgets, as well as any other change, regardless of monetary value.

The CMP addresses a general requirement for implementation of contingency plans and procedures that would apply in case of an upset in the site’s water balance or a temporary shutdown. If such a situation constituted a site emergency, it is understood that Cyanide Emergency Action Plan (CEAP) requirements would apply. Specific procedural guidelines have been developed in the CEAP that document the operation’s planned responses to non-emergency temporary shutdown needs, including shutdown for economic reasons, or as may be required in response to a regulatory action or the routine recovery from a water balance upset from prolonged rains and prolonged drought.

The Mines Group has developed and delivered a management tool as a linked tab in the water balance model that permits rapid quantification of the risk of overtopping lined pond systems (and releasing process solution to the environment over the emergency spillway) or running out of makeup water. Any observations of deficiencies that have potential occupational health and safety or environmental impacts, will trigger the generation of an occupational health and safety incident report or a nonconformance, corrective and preventive action form.

Inspection reports include inspection dates, the name or initials of the operator or supervisor, and note any specific actions required as a result of the inspection. Repairs, maintenance, or other corrective actions required from inspections are reviewed in the next day’s planning meeting and specific PM actions initiated where appropriate. Original inspection records are retained. Any observations of deficiencies that have potential occupational health and safety or environmental impacts will prompt the generation of an occupational health and safety incident report or a “nonconformance, corrective and preventive action form. Both report types are filed, and document the date, the individual reporting the issue, and the corrective/preventive action required.
Tüprag has a robust SAP software-based PM system in place that encompasses major machinery, tanks, pumps, valves, sensors, and other equipment involved in the management of cyanide (the exception being the fixed and hand-held HCN monitors, calibration and maintenance of which is managed directly by the H&S department). The SAP system was commissioned in 2010; data from the preceding system were retained for historical purposes. The system generates PM actions based on a predetermined maintenance schedule, or upon generation of work orders in daily response to specific inspection observations or observed operational needs. Work orders generated from the SOP system can, at the planner's direction, be supported with substantial annotations, sketches or photographs, or other procedural detail to support the proper performance of the required work.

The Kışladağ operation is powered by the national grid via a local substation, but has three 1600-kVA diesel generator sets dedicated to the backup operation of major pumps and other key infrastructure associated with heap leach pad and ADR. Two generators are reportedly adequate for the operation of major pumps and other critical equipment, with one set held in reserve. The generator sets are installed adjacent to the ADR and operational tests are conducted on at least a monthly basis.

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

The operation is: ■ in full compliance
                   | in substantial compliance
                   | not in compliance…with Standard of Practice 4.2.

Discuss the basis for this Finding/Deficiencies Identified:

This standard of practice is not applicable, as the Kışladağ Mine is strictly a heap leach operation and does not use mill-based extraction technology.

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

The operation is: ■ in full compliance
                   | in substantial compliance
                   | not in compliance…with Standard of Practice 4.3.

Discuss the basis for the Finding/Deficiencies Identified:
Tüprag has contracted with the designer of the heap leach facility (The Mines Group) for the development of a comprehensive, probabilistic water balance; the Mines Group’s scope of services includes continued liaison support for the maintenance of the water balance, and the provision of ongoing operational guidance and support for emergency or contingency situations. The water balance is constructed using Excel™ software and is documented in a standalone report that presents the conceptual model for the water balance, describes the major inputs to the model, and presents a deterministic version of the model for use as an operational water management tool to predict and manage the risk of potential discharge. Among other factors, the model specifically considers solution application rates, precipitation infiltration rates, evapotranspiration rates, and potential power outages. Freezing and thawing impacts were not considered applicable to the development of the model, as although the site has experienced snow and freezing temperatures, there has never been a snowpack with duration greater than 30 days and a spring snowmelt event has never occurred.

A stochastic version of the model, which will permit the integration of probability distributions in lieu of point values or synthetic data is not described in the noted version of the report; discussions with Mines Group representatives indicate that development of the next iteration of the document is held pending decisions on the scope of future phase expansions. However, the current deterministic version of the model is capable of integrating frequency distributions for precipitation, and hence may be considered “probabilistic” in the sense intended by this standard of practice.

The Mines Group has also developed and delivered a management tool as a linked tab in the water balance model that permits Tüprag to quickly quantify the risk of overtopping the lined pond systems (and potentially releasing process solution to the environment over the emergency spillway) or running out of makeup water.

The water balance model specially considers solution application rates. Correspondence with the Mines Group indicates that a 100 year, 24 hour storm design storm event was assumed that includes the draindown volume from a 24 hour power outage. Since only 8 years of precipitation data were available for the Kışladağ site, data from Usak (based on 78 years of records) were deemed to be a significantly better measure of variance. A synthetic precipitation history was therefore developed for Kışladağ using Usak data; a similar synthetic record of rain days per month was also developed based on Usak data. Usak is approximately 50 km from the Kışladağ site.

Runon area contribution volumes are specifically considered in the water balance model. No solution losses to factors other than evaporation are predicted or reflected in the water balance model, with the exception of water that may be captured in the ore from the difference between initial and operating water content. The mine is connected to the national grid via a local substation; three 1600 kVA emergency diesel generator sets are installed at the ADR complex that are capable of operating solution pumps and other critical equipment items.
No solution is discharged to surface waters, and the operation does not use cyanide detoxification technology. The facility design has no other major aspects that affect water balance; however, advance planning is in process for a major expansion of the leach pads to the north which, if authorized, will require the development of additional process, stormwater, and emergency ponds.

Documented inspections are also conducted to monitor the condition and functionality of solution risers, distribution collection lines, leak detection arrangements, as well as surface levels, condition, and available freeboard for the solution, stormwater, and emergency ponds. Operators also complete a daily record that records hourly or shift-specific readings of key operational data. This information is reviewed daily and forms the basis for operational adjustments to maintain targeted mineral recovery rates. All ponds are designed with 1 meter freeboard above the design capacity, which is considered a 100-year, 24-hour design storm event, as well as the potential for draindown from a 24-hour power loss (even though backup generators are provided).

Precipitation and evaporation data are also collected daily from the onsite meteorological station and can be input to the water balance model using the operational monitoring tool described previously, which permits Tüprag to quickly quantify the risk of overtopping and supports decisions to make specific operational adjustments.

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

The operation is: ■ in full compliance
   ▼ in substantial compliance
   ◯ not in compliance…with Standard of Practice 4.4.

Discuss the basis for the Finding/Deficiencies Identified:

The entire Kışladağ operation is surrounded by a well-maintained security fence designed to prevent ingress by livestock; secondary chain-link fencing is installed around the perimeter of the pond areas.

Although perforated HDPE collection pipelines at the western (downslope) edge of the heap leach pad are for the most part buried in a gravel-filled HDPE lined trench, small open concrete and HDPE-lined collection basins have been constructed at intervals to facilitate the collection of pregnant solution. Tüprag has observed that 20-30% of the pregnant solution captured from the heap flows over the top surface of the pad over liner vs. infiltration to the buried perforated collection pipes. Solution accumulating in these basins is commingled with the flow from the perforated pipelines and routed through a
concrete header to a pipeline that drains to the pregnant solution pond. Because solution concentrations are $\geq 50$ ppm, these basins were covered in plastic bird netting, and were provided with cutouts to permit routine dip sampling of solution.

During the audit, substantial gaps in the bird netting over these basins were observed at nearly all basin locations. However, prior to the submittal of this report, the bird netting arrangement was re-installed or adjusted for each basin to eliminate any gaps in the netting. Photographic evidence was provided attesting to the satisfactory completion of this rework, and the associated shift inspection form was updated to emphasize checks on bird net integrity. A series of solution, stormwater, and emergency ponds has also been constructed that include:

- ISP 1, an intermediate solution pond that allows Tüprag the option of recycling pregnant solution back to the heap to increase the head grade of gold prior to recovery;
- PSP 1, pregnant solution pond;
- BSP 1, barren solution pond;
- SWP 1, originally a stormwater pond, but now used as a second barren solution pond;
- PRP 1, a stormwater pond;
- PRP 2, a process solution “surge” pond;
- PRP 3, a stormwater pond; and
- PRP 4, a stormwater/emergency pond.

PRP 1 and PRP 3 receive only stormwater and hence any accumulation will be $<50$ ppm $\text{WAD}_{\text{CN}}$. With respect to PRP 4, accumulated runoff in non-emergency use will likewise be $<50$ ppm $\text{WAD}_{\text{CN}}$, so no birdballs are required. This pond drains runoff from areas of heap under construction, prior to bringing under leach, and pursuant to the solution management requirements of the Cyanide Management Plan is pumped as low as possible to ensure that substantial emergency capacity remains available. There has never been an emergency use of this pond. However, discussions with Tüprag management confirm that clearance of pond PRP 4 as the result of an actual emergency would be managed as an emergency action under the controlled processes described in the CEAP. Such actions will include the assessment of $\text{WAD}_{\text{CN}}$ concentrations in the pond and (consistent with the solution management requirements of the Cyanide Management Plan) rapid evacuation to the ADR ponds (i.e., ISP 1, BSP 1, and/or SWP...
1) using submersible pumps and a double pipeline. A separate gravity line is also available that would permit evacuation directly to the ADR.

In summary, all ponds that have (or could potentially have) ≥50 ppm WAD$_{CN}$ (i.e., ISP 1, PSP 1, BSP 1, SWP 1, and PRP 2) were provided with plastic birdball coverage. All ponds requiring birdballs were adequately covered except for PRP 2; this situation had been noted by Tüprag, however, and birdballs were on order at the time of the audit. The shipment was received prior to the submittal of this report, and photographic evidence was provided to the audit team demonstrating the addition of sufficient birdballs to provide full coverage. In addition, improvements were made to the shift inspection form to ensure the maintenance of full birdball coverage. Leach solution emission lines are buried on the top surfaces of the heap to minimize potential for ponding; no spray emitters are used. On side slopes required to go under leach, emission lines are placed on the surface at evenly-spaced intervals. No ponding issues were observed during the onsite audit.

Since mortality reporting procedures have been in effect, only one event (one bird found in a process pond) has occurred that may be attributable to the use of cyanide. Given the presence of significant bird populations observed in and around the area of the mine, this is interpreted as being indicative that the measures to prevent birds, other wildlife, and livestock from the adverse effects of cyanide (i.e., birdballs, netting, perimeter fencing) are generally effective.

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

The operation is: ■ in full compliance

▶ ▼ in substantial compliance

◆ ▼ not in compliance…with Standard of Practice 4.5.

**Discuss the basis for the Finding/Deficiencies Identified:**

Kışladağ has not experienced any indirect discharges of cyanide solutions to surface waters. The process circuit is designed and operated as a closed circuit with zero discharge to surface and groundwater. Although not a regulatory reporting requirement, Tüprag monitors surface water quality to ensure that indirect discharges to surface water are not occurring. The monthly surface water monitoring program for the mine site includes sampling downstream of the heap leach pad, ADR and process ponds. The samples are collected monthly by Dokuz Eylül University Geology Department (DEU) and selected samples are sent to Analytical Laboratory Services (ALS) in Vancouver and to DEU’s laboratory for analysis. The analyses include Total cyanide and WAD cyanide and results have consistently been below the detection limit of 0.005 mg/l since
records began. Considering WAD cyanide a surrogate of free cyanide, the results are less than the 0.022 mg/l criteria for free cyanide recommended by ICMI for protection of aquatic life.

Until 2012 water quality in Turkey was regulated by the Ministry of Environment. Depending on potential use quality standards were divided into four classes with Class I being the for protection of drinking water and aquatic life; Class II for animal production, irrigation and possible drinking water use; Class III for industrial use and Class IV for polluted and for industrial use after treatment. For Total cyanide the standards are 0.01, 0.05, 0.1, and >0.1 mg/L, respectively for Classes I through IV. There were no standards for WAD cyanide or free cyanide. However, since 2012 the jurisdiction for control of water quality has been split; the Department of Water and Forestry regulate ground water and the Ministry of Environment regulates surface water. To date, governing regulations contain no defined water quality standards. It is understood that underground water quality standards will be defined by the State Hydraulic Works Department via studies in relevant basins that will be conducted through 2015. There are no cyanide parameters in the surface water regulation, however. Tüprag has correspondence on file confirming that in the interim period while standards are being developed for the new regulations, earlier regulatory standards apply. Based on review of monitoring results to date for Kışladağ, surface and groundwater quality meet the strictest standard for protection of drinking water and aquatic life with regard Total cyanide.

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

The operation is: ■ in full compliance
| in substantial compliance
| not in compliance…with Standard of Practice 4.6.

Discuss the basis for the Finding/Deficiencies Identified:

Tüprag has implemented solution management and seepage control systems at Kışladağ to protect groundwater beneath and downgradient of the operation. The cyanide facilities consist of cyanide storage warehouses, heap leach pad, ADR plant, process solution ponds, emergency ponds, and related piping. As-built drawings show the heap leach pad is constructed with synthetic 2 mm thick linear low density polyethylene (LLDPE) liner over 0.3 m (0.5 m for Phase 4) of compacted low permeable clay layer to minimize seepage and protect beneficial uses. During Phase 3 construction geosynthetic clay liner (GCL) has also been used in combination with the compacted clay liner. A leak detection system is installed between the clay layer or GCL liner, and the synthetic liner under leach pad. The leach detection system is monitored each shift.
The natural gradient of groundwater flow within the underlying substrate material is toward monitoring wells located west of the ADR. In addition to the leak detection system, these wells provide another system for monitoring the integrity of the leach pad.

The solution ponds are double-lined using high density polyethylene (HDPE) liners separated by a geonet leak detection system between the two liners. Piping for pregnant, intermediate and barren solutions related to the heap leach facility are contained within lined channels. The ADR plant is constructed with a concrete floor and stem walls, which provide adequate spill containment for the tanks located within the plant. Additionally there is a network of groundwater monitoring wells around the heap leach, ADR and solution ponds that are sampled on a monthly schedule.

Tüprag has installed groundwater monitoring wells at seven locations around the leach pad and ADR. These consist of three single wells and four sets of two nested wells. The wells vary in depth between 21 m and 180 m and are screened to monitor groundwater quality within the underlying strata. The location and construction of the monitoring wells and the design of the monitoring program was undertaken by a professor of hydrogeology at Middle East Technical University in Ankara, and forms the basis for the monitoring program approved by the Turkish Government.

Groundwater samples are collected monthly from each of the nine wells by DEU, and the samples analyzed by ALS and DEU. In addition, the Environmental Department collects samples for Total cyanide and WAD cyanide every two weeks, in conjunction with the Inspection and Monitoring Committee formed by the Usak City Governor. The latter committee includes members from government organizations as well as non-governmental organizations (NGOs).

WAD cyanide concentrations have consistency been below the detection limit of 0.005 mg/l, and considering WAD cyanide a surrogate of free cyanide, the results are less than the 0.022 mg/l criteria for free cyanide recommended by ICMI for protection of aquatic life. Cyanide concentrations in groundwater have also consistently remained below the threshold concentrations for the protection of beneficial use of groundwater i.e., below the Class I standard in Turkey for protection of drinking water and aquatic life and ICMC guidance for protection of aquatic life.

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

The operation is:

- in full compliance
- in substantial compliance
- not in compliance…with Standard of Practice 4.7.

Kışladağ Gold Mine
Name of Mine

Signature of Lead Auditor

November 15, 2013
Date

Page 19 of 41
Discuss the basis for the Finding/Deficiencies Identified:

All cyanide mixing, storage, and process tanks are located within the footprint of the ADR in a concrete secondary containment area, interconnected with concrete floor drains and HDPE solution pipelines. During the site inspection, several cracks were noted in the concrete containment berms or knee walls on the east side of the mixing and storage bay; however, prior to the submittal of this report, Tüprag provided photographic evidence of satisfactory concrete repairs, as well as an updated operator’s shift inspection checklist providing increased emphasis on detection and repair of concrete containment cracks. Total available containment for cyanide areas within the ADR was well in excess of 110% of the largest contained tank volume (the cyanide holding or storage tank). The acid storage, neutralization, and wash tank is located within a totally separate containment. The cyanide mixing and storage tanks, the carbon strip vessel and tank area, and the acid storage, neutralization, and wash tank areas are all under roof. Precipitation collected in the open air carbon-train section of the ADR containment will report to a concrete sump on the west side of the second train that drains (or can be pumped) to the barren solution pond. Cyanide-contaminated water collected within the secondary containment at the ADR would report to a concrete sump on the west side of the second carbon train, from where it could be pumped (or in overflow conditions, would drain by gravity) to the intermediate pond (ISP-1) or the BSP-1 barren solution pond. Overflow from ISP-1 would flow to BSP-1 in upset conditions. During site inspection, it was observed that there was a gap in the secondary containment between the western edge of ISP-1 and the eastern edge of BSP-1. However, prior to the submittal of this report, Tüprag installed a combination of concrete and welded geomembrane panels that connect the two pond liners and effectively prevent potential impacts to soil or groundwater. Interstitial leak detection systems are provided for all ponds that are checked on a daily basis, in addition to several downgradient monitoring wells.

If pond overtopping emergencies were to occur due that could not be contained within the existing series of process, stormwater, and emergency ponds, a concrete collection trench and spillway arrangement is provided to the west of the ADR. Tüprag also maintains contingency procedures and an active hydrogen peroxide dosing system at the PRP-1 pond that would allow for neutralization of any residual cyanide by routing excess solution or contaminated water through the PRP-1 pond, prior to permitting emergency discharge through the spillway.

All process solution pipelines within the footprint of the ADR complex are contained within a concrete containment. Pregnant and barren solution pipelines between the ADR complex and the leach pad are placed within an HDPE-lined trench. Transfer pipelines between the pregnant, barren, stormwater, and emergency ponds are placed in HDPE-lined trenches, pipe-in-pipe connections, or the concrete channel upstream of the emergency spillway.
There are no permanent surface water features downgradient of the heap leach pads, ADR, or solution, stormwater, and emergency pond areas; ephemeral streams may exist for short periods of time in the spring, but the overall surface water contamination risk is very low. If pond overtopping emergencies were to occur that could not be contained within the existing series of process, stormwater, and emergency ponds, a concrete collection trench and spillway arrangement is provided. Tüprag also maintains contingency procedures and an active hydrogen peroxide dosing system at the PRP-1 pond that would allow for neutralization of any residual cyanide by routing excess solution or contaminated water through the PRP-1 pond, prior to permitting emergency discharge through the spillway. As peroxide tends to break down over time, the peroxide storage tanks are periodically tested and replenished.

During site inspection, a minor vertical crack was noted in one location on the west side of the concrete containment trench berm wall near the spillway. Prior to the submittal of this report, Tüprag repaired the crack, provided photographic evidence of satisfactory repair, and updated its operator inspection form to better emphasize checks for containment integrity.

All cyanide mixing, storage, and solution tanks are constructed from carbon steel. Cyanide solution pipelines and piping system components are constructed of HDPE or carbon steel; both materials are compatible with cyanide and high pH conditions. Solution, stormwater, and emergency ponds are all double-lined thermally welded HDPE geomembrane construction.

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

The operation is: ■ in full compliance
| in substantial compliance
| not in compliance…with Standard of Practice 4.8.

Describe the basis for the Finding/Deficiencies Identified:

The team of contractors responsible for all phases of heap leach and solution/stormwater/emergency pond construction have been supervised by the Kışladağ Construction Management (KCM) department, and have been subject to multiple-level quality inspections and final approvals by the KCM Construction Manager. Final inspection results, including test reports and construction photographs, are compiled in bound construction reports which are retained on file; information copies have also been provided to appropriate governmental representatives. It should be
noted that no professional certification process for engineers currently exists in Turkey; however, KCM department managers are experienced degreed engineers. Credentials were verified by review of the managers’ academic diplomas/completion certificates.

With regard to the construction of the ADR, only signed as-built drawings could be provided as evidence of QA/QC program implementation during construction; moreover, the name and organization of the signatory and the date signed were not available. Tüpraş therefore opted to conduct an independent engineering review for the ADR. Separate QA/QC data packages were provided to address the containment repairs between the ISP-1 and BSP-1 ponds as well as the modification of the mixing tank deck and hopper area. QA/QC records for the various phases of heap leach pad construction and included in bound construction reports prepared for each phase and are retained on file. QA/QC data packages for the containment repairs between the ISP-1 and BSP-1 ponds as well as the modification of the mixing tank have also been received and will be retained on file.

A final independent QA/QC report for the ADR facility was completed and provided for review prior to the submittal of this report, along with the reviewer’s academic credentials and professional resume. The report documents independent review of current Piping and Instrumentation Diagrams, general plan and section view arrangement drawings, concrete placement/foundation drawings, structural steel drawings, electrical diagrams, control system drawings, and other details, as well as a site visit and thorough plant inspection to identify and evaluate operational modifications that have been made since the original commissioning. The report concluded that:

- materials used in tanks, pumps, valves, and other system components are compatible with high pH operations and cyanide service;
- automated monitoring and control systems were functioning properly;
- secondary containment arrangements isolated cyanide facilities from incompatible materials, and were suitably sized relative to the volume of the largest contained tank (i.e., the cyanide holding or storage tank);
- containment integrity was satisfactory;
- PM schedules were consistent with the requirements of associated operational and maintenance manuals, and
- overall, the ADR has been designed and constructed to an acceptable quality standard, and if operated within its design parameters will provide a high level of protection against environmental releases of cyanide or explores that would be deleterious to human health and safety.
4.9 Implement monitoring programs to evaluate the effects of cyanide use on wildlife, surface and ground water quality.

The operation is:

- in full compliance
- in substantial compliance
- not in compliance...with Standard of Practice 4.9.

Describe the basis for the Finding/Deficiencies Identified:

The water quality monitoring procedure defines the requirements for undertaking quality monitoring in accordance with the Turkey’s Water Pollution Control Regulation, 2004. The procedure sets out responsibilities; equipment; parameters to be monitored; monitoring locations, times and methods; reporting and file management. The procedure includes maps showing the location of sampling points. It also requires the ADR and heap leach areas to be monitored daily by the Process Department and weekly by the Environmental Department, along with the immediate reporting of any mortalities.

The location and design of the original monitoring well installation was overseen by a professor of hydrogeology at the Middle East Technical University in Ankara, who continues to provide advisory services on hydrogeology at the mine and design and location of new monitoring wells as the heap leach pad expands. The water quality monitoring procedure was designed by Tüprag’s Environmental Manager, who has held supervisory positions at other mining operations, has a bachelor’s degree in environmental engineering, and has completed a Master’s study on the treatment technologies of cyanide containing industrial wastewater.

The Monthly Water Quality Monitoring Procedure details the sampling methods including purging monitoring wells, selection and labeling of sample containers, filtering and preservation of samples, and completion of laboratory request forms and shipment instructions. The Procedure specifies the parameters to be analyzed, including the cyanide species to be analyzed. A field log sheet is used to document the date of sampling, location, well purge data (temperature, conductivity, pH, volume pumped), weather conditions, visual characteristics of the sample, sampling device calibration date, and any anthropogenic influences that may impact sample quality.

The Kışladağ process circuit is designed and operated as a closed circuit with zero discharge to surface and groundwater. A surface and groundwater monitoring program is in place to monitor for potential leakage and release of cyanide to the environment. A monthly surface water monitoring program is in place for the mine site that includes sampling downstream of the heap leach pad, ADR and process ponds. There is an array of seven monitoring wells upgradient and downgradient of the leach pad and ADR that are sampled on a two week schedule (monthly sampling for permit requirements...
and the intervening two week sampling for internal purposes) for Total and WAD cyanide. In addition there are monitoring systems at the leach pad and process ponds to monitor for potential leakage of the pond and leach pad liners.

The wildlife mortality monitoring procedure describes responsibilities, monitoring locations; frequency, reporting procedure, and file management requirements. The procedure requires the ADR and heap leach areas to be monitored daily by the Process Department and weekly by the Environmental Department. All workers also complete environmental induction and annual refresher training. Workers are trained to immediately report wildlife mortalities immediately to the Environmental Department.

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

Standards of Practice

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

The operation is: ■ in full compliance
□ in substantial compliance
□ not in compliance... with Standard of 5.1.

Describe the basis for the Finding/Deficiencies Identified:

Tüprag was originally required to develop a reclamation plan in compliance with relevant regulations in 2008 (“Regulation about Reclamation of disturbed areas due to Mining Industry Activities”, issued by the Ministry of Environment). There was an obligation under this regulation stating that every 4 years a renewed plan should be submitted for Ministry approval. However, the regulations changed in September 2010; Forestry legislation now takes precedence, and the former reclamation plan format is no longer valid for the mining industry. Reclamation planning is now integral to the environmental impact assessment (EIA) process that must be implemented with each major leach pad expansion. A new EIA was submitted in May 2011 to support increased heap leach pad capacity increase. During this stage, the Government Forestry Directorate was responsible for review and approval of rehabilitation plan (which is included as Section 5.6 of the EIA in the format specified by the Forestry Directorate). As a result of this review, it was requested that annual reclamation plan updates be submitted to the local Forestry Directorate. A plan was prepared and submitted in 2012, and the 2013 plan was near finalization at the time of the onsite portion of the audit. The 2013 version of the plan was submitted to the local forestry Directorate in June; it is understood that
insofar as cyanide facilities are concerned, this plan is supported by an annually updated Cyanide Facilities Decommissioning Plan, prepared by The Mines Group. The latter plan presents conceptual procedures for decommissioning the heap leach operation, including:

- leach fluid management and stabilization (i.e., the recycling of barren solution and forced spray evaporation to reduce volumes and foster the natural breakdown of residual cyanide);
- regrading and revegetation of the heap surface;
- management of solution ponds, which will be maintained open until the volume of fluid has been reduced to the level that will permit management via evapotranspiration;
- conversion of 4-5 solution ponds to zero-discharge evapotranspiration cells, and eventual closure of those cells;
- decontamination and closure of the ADR (and the future SLS system), bag-in-box and SLS warehouses, and associated infrastructure (including sale or transfer of decontaminated tanks and equipment);
- final decommissioning and decontamination of the KCTP (currently out of service) and the KCTP cyanide warehouse; and
- sale of unused cyanide reagent stocks or return to the vendor.

The plan is supported by a third party cost estimate, rinseate quantity calculations, and conceptual drawings of the configuration of the operation in closure. The plan also acknowledges that it will undergo annual review and updates, and that such updates are likely to include the testing and evaluation of proposed closure methods to ensure their ultimate suitability, and to revise or improve such planning if improved technologies are developed over time. The estimate demonstrates the general order in which planned actions will be conducted, which, in the auditors’ judgment can be interpreted as a conceptual schedule. Prioritization and sequencing of the specific closure actions upon which a final schedule would be based is also discussed in the conceptual procedures documented in the decommissioning plan; annual updates are required to be submitted to the local Forestry Directorate.

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

The operation is: □ in full compliance

Kışladağ Gold Mine
Name of Mine

Signature of Lead Auditor

November 15, 2013
Date

Page 25 of 41
in substantial compliance

| not in compliance...with Standard of Practice 5.2.

**Describe the basis for this Finding/Deficiencies Identified:**

Eldorado Gold commissioned The Mines Group to develop a cyanide facility decommissioning plan and third party closure cost estimate. The latest available estimate is documented in the decommissioning plan. The cost estimate includes a number of facilities that are beyond the scope of this audit (i.e., the Efemçukuru Concentrate Processing Facility/KCTP, which was not operational at the time of the audit except for the cyanide storage warehouse; the backfilling and revegetation of heap draindown/evapotranspiration ponds; physical stabilization and reclamation of disturbed land; and management/reconfiguration of other mine components not directly related to the management of cyanide). However, all cyanide management facility decommissioning activities required by this standard of practice to be included in the cost estimate were properly represented. These included costs for:

- return of unused stocks of cyanide to the vendor (from warehouses at the ADR and KCTP);
- rinsing of warehouses and disposal of rinseate;
- detoxification of residual cyanide in tanks, pipelines, and piping system components within the ADR, and disposal of residues within the heap;
- solution pumping and management of leach pad draindown and evapotranspiration in converted solution ponds.

The cost estimate is reviewed every five years, or more often whenever revisions to the plan are made that affect the decommissioning of cyanide management infrastructure.

Eldorado Gold has established a “self-insurance” type of financial assurance mechanism for Tüpraş; the details of this financial assurance mechanism are consistent with the Canadian Generally Accepted Accounting Principles and are documented in a corporate practice which was referred to a certified financial auditor for independent review. The auditor is operating under an engagement letter that commits Eldorado to the satisfactory resolution of any comments. The amount of the financial assurance proposed by Eldorado in the financial calculations generated in compliance with the aforementioned corporate policy for the Kışladağ Gold Mine in calendar year 2012 substantially exceeds the estimated decommissioning costs for relevant elements of cyanide infrastructure. The independent auditor’s report concluded that the financial assurance mechanism was satisfactory, and was provided for the auditors’ review prior to the submittal date of this report. Publically available financial information (i.e., current
Unaudited Condensed Consolidated Financial Statements) also indicates that Eldorado is in good financial standing and has substantial cash reserves at least two orders of magnitude above what would be required to close the cyanide management facilities at Kışladağ in accordance with this standard of practice.

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

Standards of Practice

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

The operation is:  ■ in full compliance
| in substantial compliance
| not in compliance…with Standard of Practice 6.1.

Describe the basis for the Finding/Deficiencies Identified:

Tüprag has developed a CMP that describes the steps and procedures for the safe management of cyanide. There are also Safe Working Procedures (SWPs) and Standard Operating Procedures (SOPs) that are cross-referenced in the Plan that provide step by step requirements for undertaking specific cyanide related tasks including transportation, unloading, storage, mixing, plant operations, entry into confined spaces, and equipment decontamination prior to maintenance. A Job Hazard Assessment (JHA) is also required to be completed prior to any maintenance operation and is performed with each work order issued. There is also an operating manual that details gold recovery operation and general operating procedures for non-cyanide specific mine operating tasks.

The use of appropriate personal protective equipment (PPE) is a workplace requirement for employees and contractors. Hard hat, steel toed boots and safety goggles with side shields are required in all workplace areas at the mine site. There are also requirements detailed in operating procedures to wear additional items of personal protection (e.g., rubber gloves, boots, Tyvek coveralls, and full face respirators with appropriate filters) as well as use of portable HCN meters when undertaking specific tasks or when working in specific areas where there is a risk of exposure to cyanide. Workplace inspections are undertaken at the start of each shift to check operation of shower/eyewash stations, and pipes, valves, tanks and secondary containments for any signs of leakage. Pre-work inspections are conducted prior to cyanide unloading and mixing operations and are also required as part of confined space entry and JHA/SWP procedures when undertaking non-routine tasks.
Tüprag has developed a change management procedure that includes a requirement for both environmental and occupational health and safety departments to evaluate and approve new or modified processes, equipment, or materials prior to implementation. Employees are encouraged to seek ways to continually improve workplace safety; this ethic was noticeable in the audit with respect to workforce attitudes and general housekeeping practices. In addition to discussions with their supervisors, workers are able to provide input into the development and evaluation of health and safety procedures during work health and safety meetings and toolbox meetings; through completion of Hazard Reporting Cards, and posting ideas to the Suggestion Box.

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

The operation is: ■ in full compliance
| in substantial compliance
| not in compliance…with Standard of Practice 6.2.

Describe the basis for the Finding/Deficiencies Identified:

The importance of maintaining appropriate pH is described in the CMP. To prevent the generation of HCN gas and optimize the efficiency of the sodium cyanide leach process, Tüprag maintains the leach circuit between pH 9.5 and 11.0 and has set an operating goal of pH 10.5 for the barren solution. Lime is added at the end of the crusher to ore conveyed to the leach pad to control effects of sulphate in the ore. Samples are collected of the barren, intermediate and pregnant solutions hourly for pH and cyanide analysis and, if the pregnant solution falls below pH 9.5, caustic is added to the circuit. There is a pH meter at the mix plant that is visually checked during mixes to confirm that pH is greater than 12.

A risk assessment was conducted prior to plant startup to identify those areas of the operation where there is a potential for significant cyanide exposure. Based on the results of the assessment, fixed HCN monitors were installed in areas of the ADR plant where there is a potential for HCN gas generation. The fixed alarms are audio and visual and are set to alarm at 4.7 ppm and 10 ppm. Operating procedures specify those tasks where portable HCN monitors are also required to be used. The fixed and portable HCN monitors are maintained and calibrated as per the manufacturer’s recommendations. HCN gas is also regularly monitored each shift at six locations) using a portable HCN meter and records maintained. In the event that HCN concentrations exceed 4.7 ppm, workers must exit the work area.
In addition to standard PPE requirements at the mine site, additional PPE (rubber gloves and boots, Tyvek overalls, and full face respirators with appropriate filters are required during cyanide mix operations. Dust filters and Tyvek overalls are also required when handling sealed IBC boxes during delivery or transfer from the cyanide storage warehouse. In the event that HCN concentrations exceed 10 ppm the area is evacuated and reentry to the area is only permitted by two emergency responders wearing chemical suits and self-contained breathing apparatus (SCBA).

Warning signage is clearly posted at entrances to the ADR and cyanide storage warehouses and on fencing around process ponds. These include cyanide hazard warning signs; prohibitions on open flames, smoking, eating and drinking; restricted entrance to authorized persons only; and PPE requirements. Cyanide mixing and process tanks are clearly labeled with cyanide warning signs. Piping is colour-coded to identify contents, and colour-code keys are posted at the ADR. Pregnant and Barren solution pipelines at the ADR, leach pad and ponds were clearly labeled with name and flow direction and were also colour-coded to identify their contents.

MSDS (Material Data Safety Sheets) stations are located in the Administration Building and at the ADR Office/Laboratory Building. The MSDS are filed in binders and segregated by mine area for ease of reference. MSDS for sodium cyanide are also posted in strategic areas of the plant where cyanide is used. In addition, first aid response information is posted on the cyanide mix tank and posters are displaced strategic locations that provide actions to be taken in the event of an HCN gas alarm. The MSDS and signage are in Turkish, which is the primary language of the workforce.

Tüprag has not experienced any cyanide exposure incidents since operations began. In the event that an incident was to occur Tüprag has procedures in place to investigate. Investigations include a root cause investigation and risk analysis to ensure that all measures are implemented to remove/minimize the risk in the workplace and prevent future occurrence. Once measures have been implemented the investigation is closed.

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

The operation is: □ in full compliance
□ in substantial compliance
□ not in compliance…with Standard of Practice 6.3.

Describe the basis for this Finding/Deficiencies Identified:

Safety shower/eyewash stations and medical oxygen units are located in strategic areas of the site to provide immediate access to workers in the event of an emergency. All
emergency response team (ERT) members are training in application of medical oxygen. Hydroxocobalamin (Cyanokits) available at the clinic in the event of a cyanide first aid emergency. The operation of the shower/eyewash stations units are checked each shift. The medical oxygen and Cyanokits are inspected monthly by the clinic.

Communication is through radio, cell phone, or fixed phone. There is also an alarm system that can be activated in the event of an emergency. The emergency response plan includes radio protocol and call channel and emergency phone numbers in the event of an emergency. Radios are available for all workers and are used by all security personnel. Cell phone reception is reliable across the site as the cell phone company has installed a base station near the Administration Building.

Emergency response procedures in the event of a cyanide release are set out in the CEAP that includes specific emergency procedures to respond to cyanide or HCN gas exposures. First aid procedures for cyanide exposure and included in MSDS posted at the cyanide mix plant and cyanide warehouses. First aid procedures are also prominently posted on the cyanide reagent tank.

Although workers are trained to recognize the symptoms of cyanide poisoning and first response actions in the event of cyanide exposure, they are not expected to apply medical first aid. The ERT members, many of which are plant operators, are trained to provide cyanide first aid including use of medical oxygen pending arrival for the paramedic or doctor. Only the paramedic and doctor are qualified to administer cyanide antidote. Since July 2013, Tüprag has onsite doctor and/or paramedic available at the clinic 24 hrs/day. There is also an ambulance located at the clinic for emergency response. This ambulance is available to transport patients to a regional hospital in Uşak, approximately 50 minutes away by paved highway if needed. The Ministry of Health department in Uşak is aware and available to respond to provide potential additional medical services that may be requested in the event of an accident.

The CEAP requires that simulation exercises are undertaken annually to test the understanding of the Emergency Control Group (ECG) roles and responsibilities and adequacy of Plan. These tests have included table top drills and mock drill exercises. In addition, the ERT conduct monthly training exercises where various emergency scenarios are tested. Since the beginning of 2013 these included a cyanide solution spill and HCN release; simulation of a large storm event causing critical pond levels; vehicle rollover and solid cyanide spill on snow with release of HCN; a vehicle accident and solid cyanide spill during heavy rain with release of HCN; and a man-down cyanide exposure scenario tested both during a night shift and a day shift.

7. EMERGENCY RESPONSE Protect communities and the environment through the development of emergency response strategies and
Standards of Practice

7.1 Prepare detailed emergency response plans for potential cyanide releases.

The operation is:  ■ in full compliance  
| in substantial compliance  
| not in compliance…with Standard of Practice 7.1.

Describe the basis for the Finding/Deficiencies Identified:

Tüprag has developed a CEAP that supplements an overall Emergency Action Plan for the mine. The CEAP specifies the emergency management organization, emergency reporting structure, emergency response protocols, roles and responsibilities, evacuation procedures and emergency communication details for all potential cyanide related emergencies including cyanide spills on and off site; medical emergencies due to contact with cyanide or exposure to HCN gas; HCN releases on and off the site; fires including cyanide or facilities (vehicles) where cyanide exists; heap leach failure; solution pond overflow; and leakage from heap leach and solution ponds.

CyPlus has developed an Emergency Response Plan specific to potential transportation emergencies between İzmir Port and Tüprag and has overall responsibility during a transportation emergency on route to the site.

The CEAP provides roles and responsibilities for communicating and initiating appropriate emergency response actions depending on the level of emergency; as well as actions to be followed in case of cyanide releases which may affect communities. These include notification of potentially affected communities and downstream villagers/village leaders to minimize the exposure to cyanide.

In the event that evacuation is required in during a cyanide related or other emergency situation, eight assembly points are defined in the plan. Security officers are assigned to account for personnel and verify that no personnel go missing during an emergency. There are 54 emergency response team (ERT) members distributed over several shifts. Tüprag has more than 150 certified first responders including the ERT. First responders are provided 3 year refresher training by Government-authorized private training organizations. Tüprag has a site clinic with a doctor and/or paramedic available 24 hrs/day. Medical oxygen and cyanide antidote kits are available. There is a fire truck, rescue vehicle, and HAZMAT vehicle specific to chemical (including cyanide) emergencies stationed in the Administration Buildings compound. These mobile
vehicles contain considerable emergency and spill response equipment that is maintained in good condition.

In the event of a cyanide spill, ferrous sulfate and calcium hypochlorite are available as neutralizing agents in situations where natural surface water sources would not be impacted by their use. Tüprag also has a large volume of hydrogen peroxide available to detoxify cyanide solution in the unlikely event that discharge to the environment is required during a catastrophic rain event.

7.2 Involve site personnel and stakeholders in the planning process.

The operation is: ■ in full compliance
   | in substantial compliance
   | not in compliance…with Standard of Practice 7.2.

Describe the basis for the Finding/Deficiencies Identified:

Tüprag has a number of processes in place where the workforce can provide input into the emergency response planning process. These include conducting risk assessment sessions in which groups of employees assess the risks and propose mitigation measures; completing JHAs; use of Hazardous Report Cards; posting ideas to the suggestion box; participation in drills and table-top simulations; and attending safety and toolbox meetings. Tüprag also has a policy to actively involve local (indigenous) communities, and public and private stakeholders to address questions and concerns on the use of cyanide in mining and annual meetings are conducted with the attendance of Private Administration Office, police and gendarme chiefs, sub-governors, village leaders, mayors and local fire and hospital representatives. The CEAP has been shared with stakeholders and their formal feedback has been received and remains on file. This feedback has been considered by Tüprag Management in CEAP development.

Because of the relative remoteness of the site, Tüprag has put in place the skills, materials and equipment to respond to all probable emergencies. In the unlikely event that additional backup is required, the Uşak, Ulubey or Eşme Fire Departments can be called upon for assistance; communications with these services is maintained through the periodic meetings discussed above. All clinic medical personnel are trained and qualified to treat cyanide exposure victims on site. If there is a need, the site clinic would communicate with the local hospitals in Uşak that are capable of responding to cyanide related medical emergencies.

24 hour ambulance service is available on the site, and additional ambulance and medical personnel can be requested from Ulubey, Eşme, and Uşak emergency medical services. An air ambulance is also available; contact numbers are in the CEAP.
CyPlus and Ayhan Nakliyat, their transport contractor, are the only stakeholders with direct involvement/responsibility in the CEAP, and are notified of any changes in the plan. Off-site emergencies associated with transportation are the responsibility of CyPlus and Ayhan Nakliyat. Ayhan Nakliyat periodically review their Transporter Emergency Response Plan, and when changes are made, provide Tüprag an updated copy.

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

The operation is: ■ in full compliance  
| in substantial compliance  
| not in compliance...with Standard of Practice 7.3.

Describe the basis for the Finding/Deficiencies Identified:

For all but Level One emergencies, which are dealt with by the local area workers, emergency response is coordinated by the Emergency Control Group (ECG), primarily composed of Tüprag managers and delegated with roles and responsibilities as ECG chair, ECG Coordinator, Site Coordinator, Communication Coordinator, Security Coordinator and Administration Assistant) to manage these aspects during an emergence. Their alternates are also defined in the CEAP. The ECG reports to the General Manager (GM) and the GM reports to the Eldorado Corporate Office in Vancouver. Above mentioned roles have appropriate authority to handle cyanide related emergencies and their responsibilities are defined in CEAP. There are 54 ERT members (fire and rescue team members) from different departments, distributed in multiple shifts. The ERT participate in regular training managed by the Emergency Response Coordinator (ERC). The ERC has a safety expertise certification issued by the government and coordinates all the training needs of the ERT.

Tüprag has a 24 hours security service and security manage the call out procedures for relevant coordinators and ERT members. An up-to-date list of emergency contacts and telephone numbers is maintained by security at the main security office. The CEAP also provides contact information for outside responders, medical facilities and communities to be notified in emergencies. Tüprag has an extensive emergency response equipment and personal gear on site to respond to cyanide related emergencies. The main fire and rescue station, two secondary fire and rescue stations, fire truck, rescue vehicle and HAZMAT vehicle. The equipment is listed in CEAP and is inspected monthly.
7.4 Develop procedures for internal and external emergency notification and reporting.

The operation is: ■ in full compliance
| in substantial compliance
| not in compliance…with Standard of Practice 7.4.

Describe the basis for the Finding/Deficiencies Identified:

The CEAP includes contact information for notifying Tüprag and Eldorado corporate management personnel, regulatory agencies, outside responders (fire and ambulance), hospitals, and call out procedures in emergency response protocols. Emergency Response Protocols provided in the CEAP define which communities the ECG will notify in the event of a cyanide emergency. Communities will be notified through communications with village and public leaders, conducted by Tüprag Public Relations staff. Community and Media Relations Guidelines in the CEAP provide detailed information on media statement preparation, next of kin notification, and spokesperson /news briefing procedure.

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

The operation is: ■ in full compliance
| in substantial compliance
| not in compliance…with Standard of Practice 7.5.

Describe the basis for the Finding/Deficiencies Identified:

The Emergency Response Protocols address recovery and neutralization of cyanide solution and solid cyanide spills. The protocols have designated the leach pad as the first appropriate location for disposal of contaminated soil and spill clean-up debris. Although there is a low risk of cyanide impacting drinking water supply lines for surrounding villages, Tüprag has confirmed that an adequate drinking water supply will be available for purchase, if needed. The CEAP states that neutralization chemicals are prohibited where cyanide has been released into natural surface water bodies. It also defines spill clean-up procedures in detail and refers to sampling after the residue has been cleaned up to confirm that remediation has been completed. The procedures define the sampling locations, sampling frequency, sampling quantity and reference values. Tüprag has an accredited laboratory capable of analyzing the water samples, as well as arrangements with university laboratories in Turkey and ALS if required.
7.6 Periodically evaluate response procedures and capabilities and revise them as needed.

The operation is:  ■ in full compliance
                       □ in substantial compliance
                       □ not in compliance…with Standard of Practice 7.6.

**Describe the basis for the Finding/Deficiencies Identified:**

The CEAP requires that simulation exercises are undertaken annually to test the understanding of the Emergency Control Group (ECG) roles and responsibilities and adequacy of Plan. These tests have included table top drills and mock drill exercises. In addition, the ERT conduct monthly training exercises where various emergency scenarios are tested. Since the beginning of 2013 these included a cyanide solution spill and HCN release; simulation of a large storm event causing critical pond levels; vehicle rollover and solid cyanide spill on snow with release of HCN; a vehicle accident and solid cyanide spill during heavy rain with release of HCN; and a man-down cyanide exposure scenario tested both during a night shift and a day shift. Each drill has been evaluated to critique the effectiveness of the ERT and the CEAP and to provide and complete follow up actions as needed to fix any deficiencies identified and improve ERT response.

Tüprag has a requirement that all procedures (including the CEAP) are reviewed on an annual basis to ensure they are up to date and reflect changes in operations, legislation and procedural improvements. The date of review and any revision is documented in each procedure, together with sign-off by the author of the change and the approval of General Manager. The CEAP is also required to be reviewed following an emergency.

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

**Standards of Practice**

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

The operation is:  ■ in full compliance
                       □ in substantial compliance
                       □ not in compliance…with Standard of Practice 8.1.

**Describe the basis for the Finding/Deficiencies Identified:**
All workers and contractors receive induction training prior to being permitted on the mine site. Induction training is a full one day program that addresses health and safety at the mine including workplace hazards, PPE, chemical hazards, MSDS, signage and alarms, emergency response, incident reports and safety meetings. The program also includes instruction on Cyanide Code; Tüprag’s CMP; cyanide properties, use, hazards, and management; PPE requirements; exposure symptoms, and cyanide first aid.

Cyanide refresher training (including cyanide awareness, risks of cyanide, cyanide handling procedures and emergency response) is required by all workers on an annual basis. For those that work with cyanide (including ADR operators and supervisors, leach pad operators (piping crew), security officers, maintenance workers, electricians, firefighting and rescue teams) this refresher training is required every 6 months. Trainees are required to undertake and pass an examination. All induction and refresher training records are tracked on INX, Tüprag’s document management and tracing system.

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

The operation is: ■ in full compliance
          □ in substantial compliance
          □ not in compliance…with Standard of Practice 8.2.

Describe the basis for the Finding/Deficiencies Identified:

As a legal requirement, plant operators must receive “Occupational Certification” before being permitted to work. Certification is gained through a 5-day program provided by government trainers. Prior to undertaking tasks without direct supervision workers are also required to undertake task training in general and task specific standard operating procedures. This task training includes training in cyanide unloading, storage and mixing operations; cleaning screens, preparation of stripping solutions, and operation of the hydrogen peroxide neutralization system. The operating procedures collectively form the basis for the training materials. Task training is only undertaken by experienced plant supervisors. Training requirements associated with the operation tasks must be completed to the satisfaction of the supervisor before a worker is allowed to work unsupervised in on the task/process. At the time of the field audit, no formal tracking system was in place to easily confirm whether refresher training had been completed for required refresher task training. However, prior to preparation of this report Tüprag designed and implemented a formal task training tracking system.

Cyanide induction and refresher training is evaluated through examination using a multiple-choice test paper. The pass mark is 80% and additional instruction and examination is required for trainees that do not make the grade. Tüprag does not have a
written examination process for task training; rather, competence is assessed by supervisors before a worker is allowed to perform the task on their own. At the time of the field component of the audit, Tüpraş was also undertaking task observations on an informal basis to monitor worker competence. Prior to preparation of this report, Tüpraş formalized a task observation program whereby supervisors and Health and Safety Department personnel are required to conduct two and one observations a month, respectively. The program will result in a total of approximately 25 task observations being performed each month; associated records will be entered and tracked on INX.

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

The operation is: ■ in full compliance
| in substantial compliance
| not in compliance…with Standard of Practice 8.3.

Describe the basis for the Finding/Deficiencies Identified:

All employees that work with cyanide complete induction and refresher training in cyanide awareness. This training addresses emergency response procedures, including recognition of cyanide exposure symptoms, decontamination and first aid, in the event of a cyanide release or if a HCN alarm is triggered. In the event of an emergency, including a cyanide spill, workers are trained to contact the local incident commander or security. The worker is trained to isolate and abandon the area, warn others to do the same and go to the designated emergency rallying points. The emergency response team is trained in responding to chemical releases including cyanide. The ERT members have been trained to apply first aid including the use of medical oxygen. Many ADR operators are members of the emergency response team and would therefore be at hand to provide immediate first aid assistance.

The ERT members completed firefighting, HAZMAT and vehicle rescue training in 2010 and 2011. The ERT also received annual cyanide first aid training from the clinic doctor and conduct monthly emergency response training exercises including, as discussed in Section 7.6, cyanide spill and worker exposure emergencies. Emergency drills and table top scenarios are critiqued following these exercises to assess the response performance and determine lessons learned and areas for improvement. Training records are retained throughout an individual’s employment. Records are in the form of signoff sheets; that include the training topic(s), trainers name and signature; date of training, and sign-off by each attendee. The course materials are either PowerPoint presentations, as in the case of induction training and cyanide awareness refresher training, or the actual standard operating procedures in the case of task training. Copies of training records are kept by the H&S Department and are entered into INX. The
Kişladağ mine is not located near sizable emergency response and medical services. Tüpraş has therefore developed its own independent onsite emergency resource capability, and has communicated with and meets annually with local community stakeholders regarding the potential risks associated with the operation, the mine’s emergency response plan and in-house response capability, and the potential additional services and support that may be requested in the event of an accident.
9. **DIALOGUE** Engage in public consultation and disclosure.

**Standards of Practice**

9.1 Provide stakeholders the opportunity to communicate issues of concern.

The operation is:  ■ in full compliance
          | in substantial compliance
          | not in compliance…with Standard of Practice 9.1.

**Describe the basis for the Finding/Deficiencies Identified:**

Tüprag community relations staff undertake periodic outreach campaigns in local villages (nine small villages and four smaller hamlets are located within a few kilometers of the mine) that provide an opportunity for external stakeholders and members of the public to ask questions or voice any concerns related to the use of cyanide. Office presences are maintained in larger cities (Usak, Izmir, and Ankara) to support community relations outreach activities and liaison contacts with appropriate national, regional, and local Government representatives; these offices provide additional points of contact through which stakeholder concerns can be raised. Many national-level stakeholder meetings have been conducted through these liaison offices. Tüprag’s general policy is to be as responsive and open as possible with respect to questions or requests for information on the use of cyanide. Tüprag also maintains a policy of openness and direct access to the Kışladağ operation, and on an annual basis organizes and conducts dozens of site tours for external stakeholders and interested members of the public. As of the date of the audit, over 10,000 people have visited the site, and site visits average some 2,000 individuals per year. All visitors receive basic information on the use of cyanide in the mining process as well as basic practices employed for the safe management of cyanide in transportation and use. In addition, Tüprag organizes annual community meetings in open-forum formats that permit participants to voice any concerns regarding the use of cyanide.

9.2 Initiate dialogue describing cyanide management procedures and responsively address identified concerns.

The operation is:  ■ in full compliance
          | in substantial compliance
          | not in compliance…with Standard of Practice 9.2.
Describe the basis for the Finding/Deficiencies Identified:

See 9.1 above; in addition, Tüprag also actively involves communities and stakeholders via annual meetings that engage public officials, police and gendarmerie commanders, sub-governors, village leaders, mayors, and local fire and hospital representatives in order to provide information about cyanide and to seek their continuing support in maintaining the currency and adequacy of the CEAP. Over 50% of the Tüprag workforce is drawn from the local communities, with over 80% of the workforce coming from Usak province. As a consequence, many external stakeholders are related or acquainted with Tüprag employees, each of whom is able to alert the Public Relations Manager or Public Relations department staff with respect to specific stakeholder questions or concerns. Tüprag policy is to evaluate and respond to any such contacts, and a register of such contacts and responses is maintained by the Public Relations Manager. To date, the preponderance of interest in the site appears to be related to employment or potential commercial opportunities.

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

The operation is: ■ in full compliance
in substantial compliance
| not in compliance…with Standard of Practice 9.3.

Describe the basis for the Finding/Deficiencies Identified:

Tüprag has developed a wide range of written materials describing the use of cyanide in mining and management of cyanide during transportation and operations; varying levels of detail are distributed as appropriate for the needs, interests, and technical backgrounds of specific stakeholder groups or meeting purposes. In addition to appropriate verbal briefings, all site visitors are provided a double-sided, four-fold brochure presenting basic site safety information and the used of cyanide in mining. Video presentations are also made available that provides a basic overview of the use of cyanide in gold mining and the precautions taken in the transportation, storage, and use of cyanide. In addition, an employee magazine/newsletter is published periodically that provides another means of communicating information on ICMC certification and other aspects of cyanide management at the site; as over 50% of the Tüprag workforce is drawn from the local communities, company newsletters represent another written source of public information. Eldorado Gold also maintains a corporate website that contains summary and technical information on the Kışladağ Gold Mine as well as an annual Sustainability Report; the latter document contains general information on cyanide management and company commitments to ICMC compliance. Literacy is not an issue in the local population; the site has developed a descriptive video of site
operations, however, and all visitors to the site are provided verbal briefings. Public meetings are supported by verbal presentations as well as visual materials.

As of the date of the certification audit, no significant environmental releases or incidents or occupational health and safety exposures have occurred. However, if such an incident were to occur, communications will be controlled via the CEAP, and the Emergency Control Group (ECG) for the incident would coordinate with the Public Relations Manager and General Manager to ensure that 1) responsible regulatory agencies and officials are immediately notified; 2) ICMI is notified; and 3) the causes of the incident and associated corrective/preventive action is discussed in subsequent meetings with communities and regulatory authorities (special or regularly scheduled). Other Tüpraş and Eldorado management staff may be involved in the coordination of such discussions, as appropriate for the nature and scale of the incident.

With respect to the wider release of such information to additional stakeholders, discussions with Tüpraş management indicate that regulatory agencies are not obliged to share information of this type to the general public. However, it should be noted that Eldorado prepares an annual Sustainability Report in accordance with Global Reporting Initiative (GRI) guidelines. As the GRI guidelines specifically require the inclusion of information on environmental or social impacts to properly inform external stakeholders, information on cyanide exposures or releases information from this mine site would be reported on the Eldorado website in the next issue of the Eldorado Gold Sustainability Report, and hence would be available to the general public, beyond those individuals engaged as part of the community meetings discussed above.