

ICMC RECERTIFICATION SUMMARY AUDIT REPORT

Gorubso Kardzhali Enrichment Plant, Kardzhali, Bulgaria

Submitted to:

International Cyanide Management Institute (ICMI)

1400 I Street, NW - Suite 550
Washington, DC 20005
United States of America

Submitted by:

Johnejack CN Code Services, PLLC

1001 East Orange Grove Road, Tucson, Arizona, USA 85718

+1 520 404-8162

kjohnejack@gmail.com

December 3, 2022

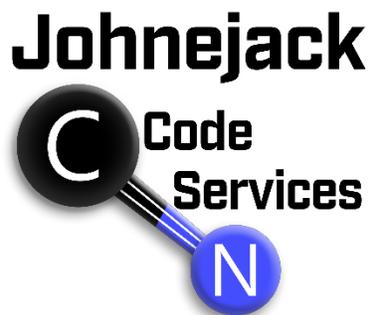


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LIST OF ACRONYMS AND ABBREVIATIONS

°C	degree centigrade
%	percent
CEA	Certified Environmental Auditor
CIL	carbon-in-leach
Code	International Cyanide Management Code
Draslovka	Draslovka Mining Solutions or Lučební závody Draslovka
ERT	emergency response team
GK	Gorubso Kardzhali
HCN	hydrogen cyanide gas
HDPE	high-density polyethylene
ICMC	International Cyanide Management Code
ICMI	International Cyanide Management Institute
IEP	Internal Emergency Plan
IPPC	Integrated Pollution Prevention and Control Permit
ISO	International Organization for Standardization
km	kilometer
mg/l	milligrams per liter
µg/l	micrograms per liter
mg/m ³	milligrams per cubic meter
m	meter
mm	millimeter
NaCN	sodium cyanide
NGO	non-governmental organization
PE	Registered Professional Engineer
PLLC	Professional Limited Liability Company
PPE	personal protective equipment
ppm	parts per million
QA/QC	quality assurance/quality control
RCB	rubber conveyor belt
SCBA	self-contained breathing apparatus
SOP	standard operating procedure
t	tonnes
TSF	tailings storage facility
WAD	weak acid dissociable

1.0 OPERATION GENERAL INFORMATION

Name of Mine: Gorubso Kardzhali Enrichment Plant
Name of Mine Owner: Gorubso Kardzhali Enrichment Plant
Name of Mine Operator: Gorubso Kardzhali Enrichment Plant
Name of Responsible Manager: Zhivka Kovacheva, Executive Director
Address: 83 Repubilkanska Street,
Kardzhali 6600
State/Province: Kardzhali
Country: Bulgaria
Telephone: +359 361 67200
Fax: +359 361 6174
E-Mail: office@gorubso.bg

2.0 OPERATION LOCATION DETAIL AND DESCRIPTION

The Gorubso Kardzhali Enrichment Plant (plant) is located in the town of Kardzhali in southeast Bulgaria. Kardzhali is located in the low eastern part of Rhodope Mountains, on both banks of the River Arda between the Kardzhali Reservoir to the west and the Studen Kladenet Reservoir to the east. The town is 260 kilometers (km) southeast of Sofia and approximately 100 km southeast of Plovdiv (Figure 1).

The plant is operated by Gorubso Kardzhali (GK) and is the oldest working process facility in Bulgaria. Ore mined at Chala and the Sedefche mines in the Eastern Rhodopes Mountains is trucked approximately 80 km to the plant. The plant produces gold doré for additional processing at a local refining facility. GK also operates a tailings storage facility (TSF) approximately 5 km from the plant (Figure 2). The water from the TSF is used for irrigation and the surplus is discharged.

GK receives solid cyanide produced by Draslovka Mining Solutions (Draslovka) at their Kolin plant in the Czech Republic and shipped by truck in boxes by CB Sped. Both the producer and transporter are certified. Red dye packets are placed in the boxes at the plant and GK adds them during mixing.

The plant, which is located in a 1940's era industrial park, consists of a warehouse, ore stockpile, mixing area, process area, plant office, and administrative office. The stockpile provides for the deposition of 3000 tonnes (t) of ore. It is covered by a metal structure to prevent contamination by dust. The ore is conveyed to the crushing plant from the stockpile, via the feeding hopper with feeder and rubber conveyor belt (RCB). The crushing plant features two stages of crushing; one jaw and one cone crusher with intermediate sieving, achieving a maximum size of the crushed materials of 25 millimeters (mm). The crushed ore is conveyed by means of a RCB to the milling plant and into an intermediate hopper with a capacity of 250 t, from which a feeder conveyor and an adjustable RCB feeds it into the mill for fine milling. The mill is a ball type equipped with a sieve with openings diameter of 6 mm. The retained material is returned by means of a RCB back into the mill for re-milling. Material that has passed through the sieve from the mill is conveyed by means of a vertical chamber pump to a vibration sieve with holes of 2.5 mm diameter. The sieve is equipped with polyurethane sieve plates. The material retained by the vibration sieve is returned via a belt conveyor for re-milling, while the material that has passed through the sieve in the form of pulp is conveyed into a chamber pump from which, via a pneumatic gate and a distribution box, it is conveyed for gravity enrichment to the Knelson concentrator.

The Knelson concentrator operates in a batch mode of unloading of the achieved gravity gold-bearing concentrate. The work process period for unloading amounts to 2 hours, with a discontinuation of the process for 5 to 10 minutes. During the unloading, the supplied pulp is transferred back to the milling cycle by means of the automatic gate and the distribution box. The management and control of all the concentration processes are fully automated and visualized on a display on the control panel. For this purpose, the Knelson concentrator is equipped with an automatic compressor, providing compressed air for the operational control of the gates.

As shown on a simplified process flow diagram, the process facility consists of the following, where the numbers in parentheses below refer to the numbers on Figure 3.

Thickener Circuit

The gravity waste, as a flow of pulp from the discharge of the hydro-cyclone in the cycle of gravity, is initially sieved by a linear sieve (1) for removal of wooden fibre and other residues and is then pumped into the process facility. The pulp with solid matter contents (an average of 13 percent [%] solid matter) is subjected to partial dewatering (thickening). For this purpose, the pulp is input into a thickener (2), where, upon addition of lime and flocculant, the same is thickened to a controlled density within the range of 30 - 35% solid matter.

Reagent Circuit

The reagent module, or mixing area, includes machinery and equipment for preliminary preparation and dosing of the reagent solutions. The processes in the mixing area are automatic and the supply of the solutions can be controlled both locally and remotely. The mixing area includes a hopper, mixing tank, a dosing (storage) tank, pumps, and associated instrumentation.

Extraction Circuit

The extraction circuit includes the processes of leaching and carbon adsorption. The processes of leaching and carbon absorption are performed in one agitator column (6) and five absorption (9) columns (carbon-in-leach, or CIL) installed in sequence. Each is equipped with a two-plane mechanical agitator (7, 8) to provide optimum mixing and good contact between the ore particles and the cyanide solution and, respectively, between the carbon and the cyanide-gold solution. The adsorption reactors are equipped with a system of pumps (11) and sieves (10), which provide for the conveyance of the carbon from the last to the first reactor, against the direction of the pulp flow. To accelerate the process, the pulp is aerated in the leaching reactor by supplying pressurized air.

The dissolved gold in the form of cyanide compounds is adsorbed from the solution on the active carbon granules, input into the cycle at the outlet of the adsorption reactors system. The carbon granules are pumped against the flow of the leached pulp to the inlet of the cycle from the adsorption reactors by a pumping system and retention sieves. The pumps convey the carbon against the flow of the pulp, and the sieves between the reactors serve to retain the carbon in the reactor, allowing the pulp to flow to the next reactor. The "loaded by gold" active carbon is separated on the sieve surface (12) from the pulp of the first reactor of the series of reactors for carbon adsorption and is conveyed for further processing (to the desorption or elution of the gold).

Destruction Circuit

The destruction circuit uses the Inco process to render the residual cyanide contents harmless after the cyanide extraction. Destruction is achieved by the product that has passed through the sieve being conveyed to the reactor for decomposition of the cyanides (31), where under intensive mixing and aeration a solution of sodium bisulfite is added (which provides the required quantity of sulfur dioxide) and, whenever necessary, copper sulfate (which acts as a catalyst). After cyanide destruction, the tailings are sent to the nearby day pond from where they are pumped to TSF. The day pond is a concrete facility.

Elution Circuit

The carbon granules with the adsorbed gold (the "loaded active carbon") are conveyed into a column for flushing (14). It operates in a batch mode with a duration of approximately 2 hours and 0.5 more hours for flushing and another 0.5 hours for emptying the column. The ratio of height/diameter of the column has been selected in such

a manner, as to allow the conveyance by gravity of the carbon from the sieve and the maintenance of a circulation flow inside the column.

The process of elution (desorption or separation of the gold from the active carbon) is achieved in the column (15) with a capacity of approximately 1 ton of carbon. The process is cyclic by adding in sequence the various solutions – first, in a heat-exchanger a solution of sodium cyanide (0.1% by weight) and sodium hydroxide (1% by weight) at a temperature of approximately 90 degrees centigrade (°C), followed by flushing with hot fresh pressurized water (at a temperature of 145°C and a pressure of 380 kilopascals). Upon its discharge from the top part of the column, the solution containing the gold elute passes through a screen filter and a heat-exchanger (23), and is then conveyed into the elute tank (16).

The elute, containing the dissolved gold, is then conveyed to the electrolysis department for electric extraction in an electrolysis bath (17). The process is cyclic with a total duration of approximately 8 hours at adjustable parameters. Upon completion of the electrolytic separation of the gold, the cathodes are washed and the gold cake is collected at the bottom of the tank, installed under the electrolytic bath. Any accumulation of gold sediment in the collection tank (gold sludge) is conveyed in the form of a suspension to a small filter-press (18) for dewatering. The collected batch of gold cake is unloaded after filling of the filter press and is dried in an electric drier (19). The dried batch of gold cake is subjected to blending by fluxes (borax, soda, quartz sand) and melting in an induction furnace (20). The blending is performed on a “blending table” under ventilation. The induction furnace for the melting is of the laboratory type. The doré is cast into ingots. The table for the blending and the induction furnace is equipped with an aspiration system, with the vented gases passing via a gas-conduit through a sleeve filter of the cassette type and is exhausted via a chimney. Dust retained by the filter is returned to the blending stage in the gold sludge and the fluxes before the smelting.

After the elution of the gold the active carbon is regenerated by thermal processing in an electric resistance rotary furnace (26). The washed active carbon is removed from the elution column hydraulically and is dewatered by a sieve (24) before being fed into the feeding hopper (25) of the regeneration furnace. The regeneration (i.e., reactivation) of the carbon granules is achieved after their stay for approximately 15 minutes in the hot area of the furnace at a temperature of 750°C. The reactivated carbon is discharged from the furnace with a maximum temperature of 300°C and is then conveyed into the water environment of the cooling tank (27), from which it is conveyed by means of a pump onto a sieve for size sorting (28), before being fed again into the main process. Certain quantities of “fresh active carbon” are also fed via the cooling tank (27) to cover losses. In this way, the carbon is moisturized before being sieved and fed into the stage for leaching and adsorption.

Cyanide Facilities

The cyanide facilities have not changed since the previous two audits and are as follows:

- Cyanide storage warehouse
- Mixing area – one mixing tank and one storage tank for high-strength cyanide
- Leaching (or CIL) area – one agitator column and five CIL columns
- Elution and carbon regeneration area – elution (stripping) tank, copper stripping tank, carbon regeneration machine and filter press, one carbon attrition silo, one activated carbon silo, and one carbon fines tank
- Cyanide destruction area – one column for the sulfur dioxide and air (Inco) process
- Appurtenances – pipes, pumps, sumps, containments, etc. associated with the above facilities

The following facilities are not cyanide facilities because GK has designed and operated the plant to limit the effluent concentration from the cyanide destruction circuit to less than the Code limit of 0.5 milligrams per liter (mg/l) weak acid dissociable (WAD) cyanide:

- Pipeline from cyanide destruction area to day pond
- Day pond
- TSF
- Pipelines to and from the TSF (slurry and reclaim)

GK provided WAD cyanide data from the internal laboratory for samples collected from April 2019 to June 2022 at five locations:

- Destruction circuit effluent (3 times per day). Maximum value WAD cyanide = 0.495 mg/l. Six minor and isolated exceedances of the 0.5 mg/l limit of 0.537, 0.640, 0.670, 0.612, 0.537, and 0.610 mg/l.
- Day pond influent (3 times per day). Maximum value WAD cyanide = 0.465 mg/l. Three minor and isolated exceedances of the 0.5 mg/l limit of 0.510, 0.572, and 0.541 mg/l.
- Day pond pool (once per day). Maximum value WAD cyanide = 0.420 mg/l. Four minor and isolated exceedances of the 0.5 mg/l limit of 0.510, 0.510, 0.510, and 0.510 mg/l.
- TSF influent (once per day). Maximum value WAD cyanide = 0.470 mg/l. Three outliers of 0.800 and one outlier of 0.920 mg/l discarded from the dataset because logically the TSF influent concentrations should not be higher than the day pond pool concentrations. No minor and isolated exceedances of the 0.5 mg/l limit.
- TSF discharge (once per day). Maximum value WAD cyanide = 0.190 mg/l. No minor and isolated exceedances of the 0.5 mg/l limit.

GK provided monthly total cyanide data from an external laboratory for samples collected from April 2019 to April 2022 at three locations. Assuming that all total cyanide exists as WAD cyanide, total cyanide concentrations less than the 0.5 mg/l limit means that WAD cyanide concentrations are also less than this limit:

- Destruction circuit effluent. Maximum value total cyanide = 0.430 mg/l
- Day pond pool. Maximum value total cyanide = 0.282 mg/l
- TSF discharge. Maximum value total cyanide = 0.050 mg/l

Taken together, the internal and external WAD cyanide data support the exclusion of the day pond, TSF, and their associated pipelines from the list of cyanide facilities. The same conclusion was reached in the 2015 and 2018 audit cycles.

The crushing, milling, gravity concentration, and thickener circuits are also excluded from the list of cyanide facilities because GK stated that these facilities use freshwater rather than process solution.

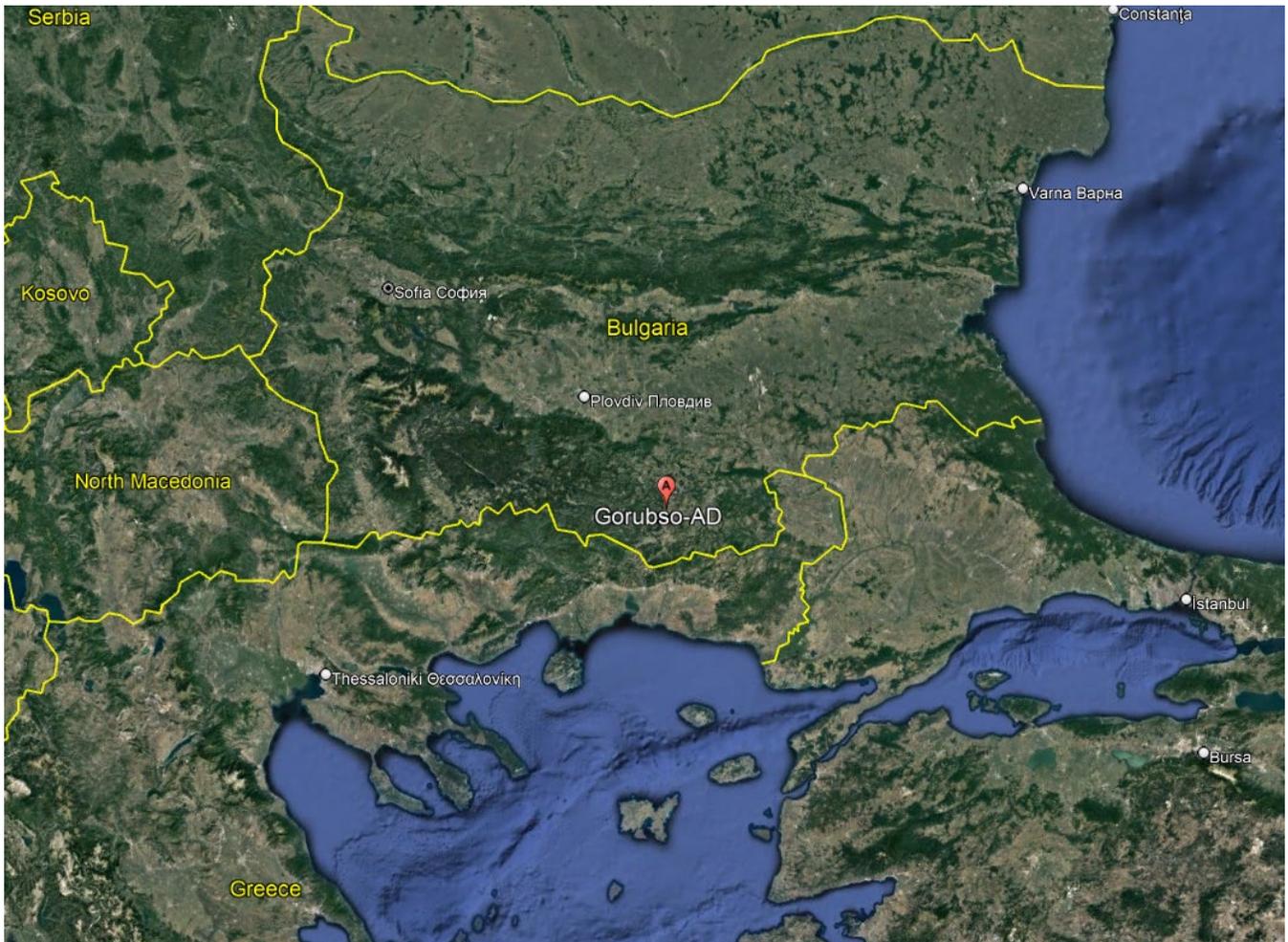


Figure 1: Location Plan

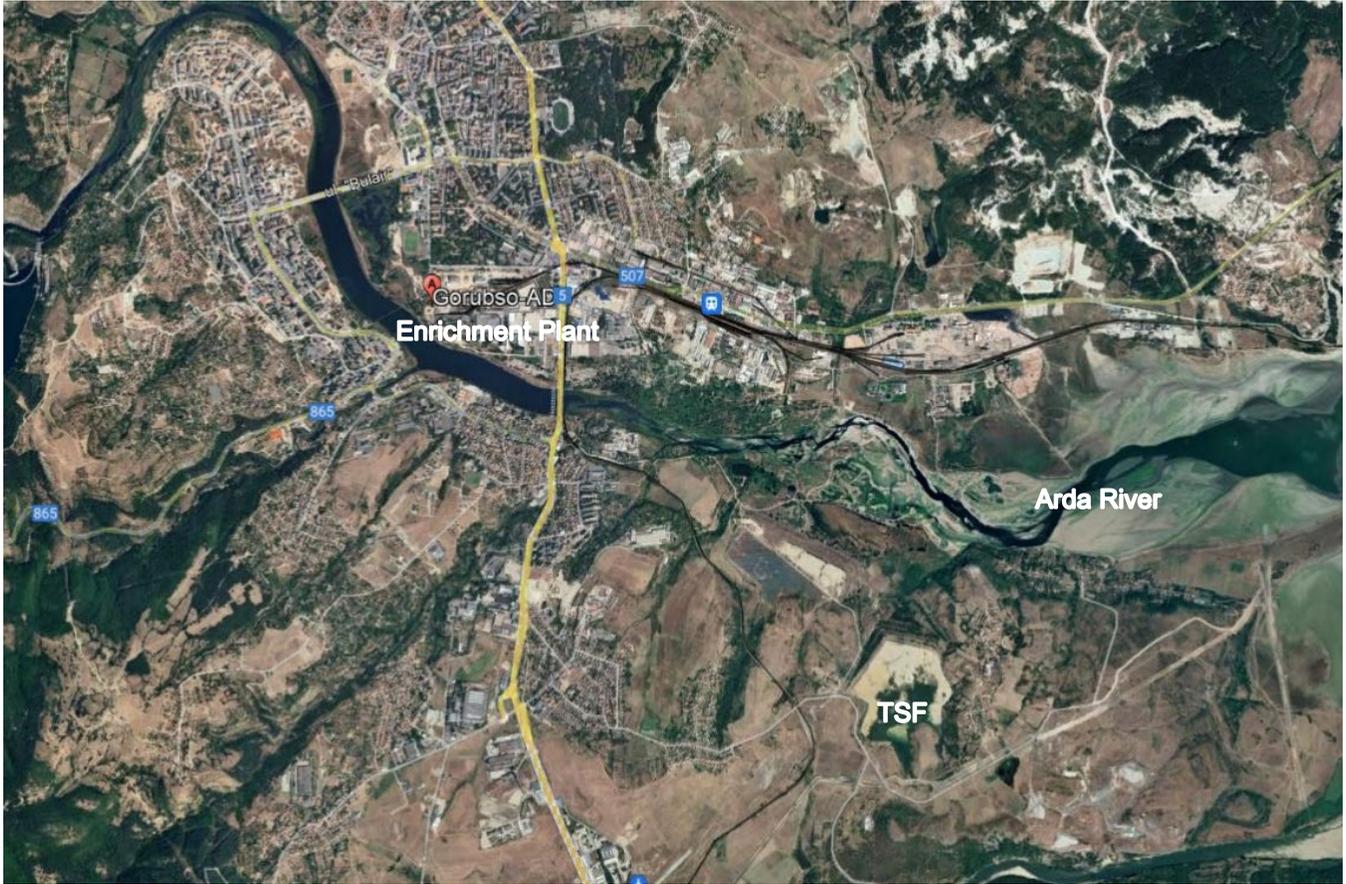


Figure 2: Regional Location Plan

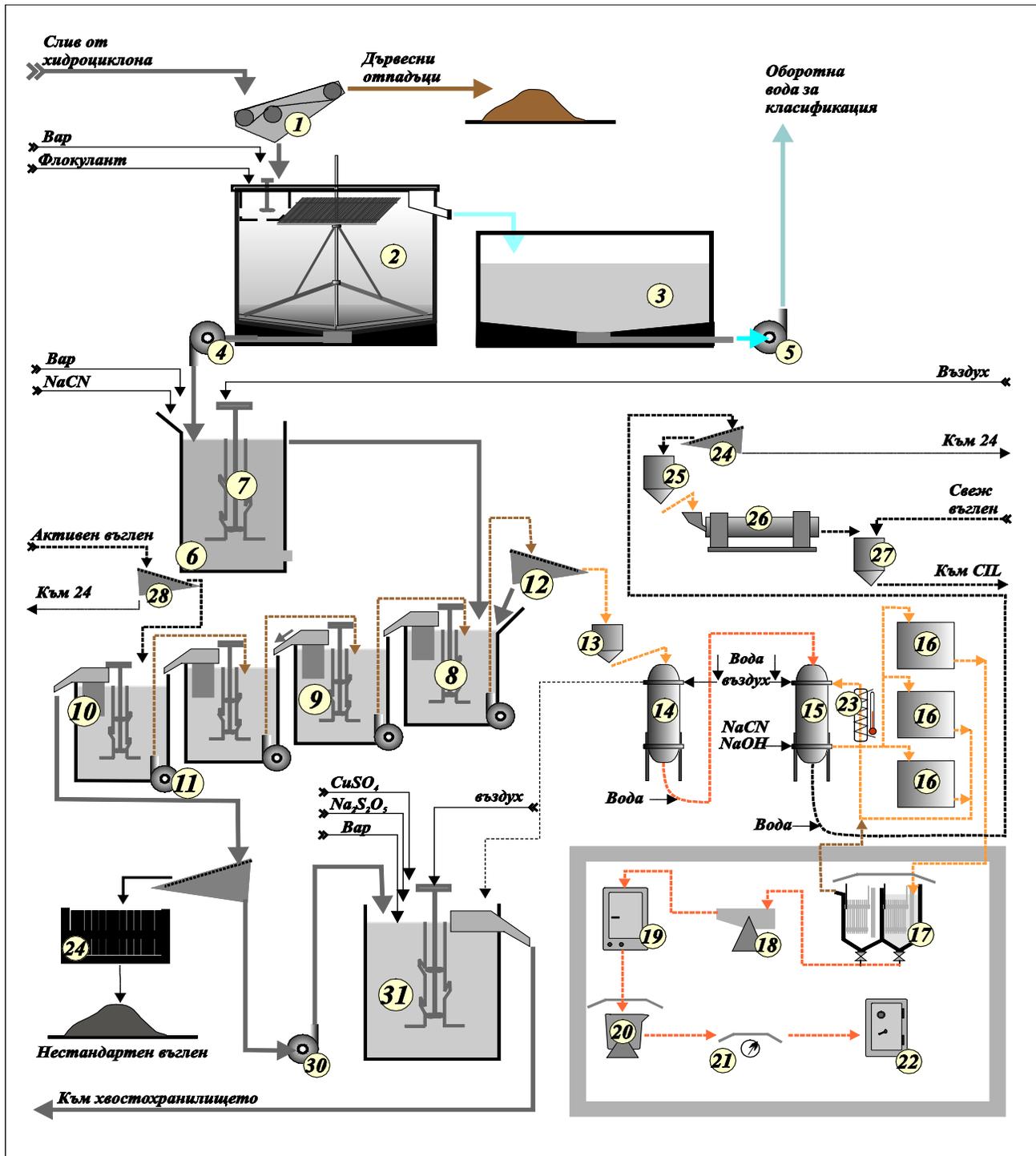


Figure 3: Process Flow Diagram (supplied by GK)

3.0 AUDITORS FINDINGS

The operation is:

in full compliance with

in substantial compliance with

not in compliance with

**The International
Cyanide Management
Code**

This operation has not experienced any compliance issues or significant cyanide incidents during the previous three-year audit cycle.

4.0 AUDITOR INFORMATION

Audit Company: Johnejack CN Code Services, PLLC

Lead Auditor: Kent Johnejack

Mining Technical Specialist: Kent Johnejack

Dates of Audit: August 15 to 19, 2022

I attest that I meet the criteria for knowledge, experience, and conflict of interest for a Cyanide Code Certification Audit Lead Auditor, as 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 Certification Auditors.

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

Name of Facility: Gorubso Kardzhali Enrichment Plant

Date: December 3, 2022

Signature: 

5.0 PRINCIPLE 1 – PRODUCTION

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

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

in full compliance with

The operation is

in substantial compliance with

Standard of Practice 1.1

not in compliance with

Summarize the basis for this finding:

GK has purchased cyanide from a producer certified by the International Cyanide Management Institute (ICMI), the Lučební závody Draslovka (Draslovka) Kolin Plant in the Czech Republic. GK receives cyanide two to three times per year in shipments of 21 boxes each (i.e., one truckload). GK provided purchase orders from throughout the recertification period. The auditor observed cyanide only from Draslovka in the warehouse. The Draslovka Kolin Plant has been certified under the International Cyanide Management Code (ICMC or Code) since 2011 with the two most recent recertifications in 2017 and 2022.



Signature of Lead Auditor

6.0 PRINCIPLE 2 – TRANSPORTATION

Protect communities and the environment during cyanide transport.

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

in full compliance with

The operation is

in substantial compliance with

Standard of Practice 2.1

not in compliance with

Summarize the basis for this finding:

GK has used certified transporters under the Code and has shipping documents identifying the transporter responsible for transporting cyanide from the Draslovka to GK. The shipping documents consist of an international consignment note, bill of delivery, invoice, receipt of delivery, and certificate of analysis. The international consignment note shows that BTL Moravia has been the single transporter from the Kolin Plant to GK. GK staff stated that BTL Moravia is a subcontractor to CB Sped. Draslovka provided a letter confirming their product is transported by CB Sped. The most recent Summary Audit Report for CB Sped indicates that CB Sped uses Code-compliant subcontractors, but without naming them. CB Sped has been certified under the Code since 2012 with the two most recent recertifications in 2016 and 2020.

7.0 PRINCIPLE 3 – HANDLING AND STORAGE

Protect workers and the environment during cyanide handling and storage.

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

in full compliance with

The operation is

in substantial compliance with

Standard of Practice 3.1

not in compliance with

Summarize the basis for this finding:

GK has received only solid cyanide in boxes during the recertification period. The warehouse and the mixing area have not changed since the 2015 initial audit. Therefore, these facilities achieved compliance with respect to design and construction at that point in time. Evidence for proper design included a design report and construction drawings stamped by a qualified engineer. Evidence for proper construction included construction records, commissioning records, and time sheets for quality assurance/quality control (QA/QC) work. Declarations of conformity were issued by designers and independent engineers.

GK has located the warehouse and mixing area away from people and surface waters. The warehouse is locked and alarmed with motion sensors, while the plant building that contains the mixing area is clearly signed for authorized personal only. GK has made the neighbouring facilities in the industrial complex aware of emergency procedures for a cyanide release or exposure. A hydrogen cyanide gas (HCN) monitor is located at the truck gate to the industrial complex as an additional precaution. The closest open water is the Arda River which is located approximately 600 meters (m) from the warehouse and approximately 200 m from the mixing area.

GK has installed level sensors in the cyanide mixing and storage tanks to prevent overfilling. The mixing tank sensor has a digital readout at the mixing area and also reports to the control room. The alarm level is set at 90%, at which point blinking light is triggered at the tank and the pump for adding water automatically stops. The storage tank sensor reports to, and alarms in, the control room. The transfer pump from the mixing tank to the storage tank automatically stops when the level in the storage tank reaches 60%. The auditor observed the value on the digital readout for the mixing tank and screenshots of levels for both tanks in the control room to verify functionality. The auditors also observed inspection and maintenance records from throughout the recertification period.

The mixing and storage tanks are installed on solid concrete bases to prevent seepage to the subsurface and within concrete secondary containment as a competent barrier to leakage. The secondary containment consists of a concrete wall and floor with a sump installed in the low point to return solutions to the detox circuit.

GK manages cyanide with measures to prevent contact with water, adequate ventilation, appropriate security, and separately from incompatible materials. The warehouse has solid walls, a roof, and an above-grade floor. The mixing and storage tanks are inside a building with competent walls and roof, as well as within concrete secondary containment. The warehouse has a wall fan for ventilation. Operators wait 15 minutes after opening the door to the warehouse for additional air exchange and then enter with a portable HCN monitor. The building

housing the mixing area has a high ceiling with doors and openings for air exchange and the mixing tank has a vent pipe to the roof. The warehouse is equipped with a door alarm, motion sensors, and exterior video cameras. Only the warehouse manager has the key and alarm code. The industrial complex has limited access via a two security gates that is locked at night. A guard is present at the main security gate and a second guard patrols the site hourly. A third guard (armed) watches the screens for the approximately 30 video cameras site wide. These guards are present 24-hours per day in three shifts. The entire site perimeter is walled or fenced. No materials or chemicals other than cyanide are present at the cyanide warehouse or within the mixing area secondary containment.

GK has maintained the warehouse and mixing area in good condition, as the auditor observed during the site visit. In addition, GK has repaired the perimeter fence during the recertification period.

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

in full compliance with

The operation is

in substantial compliance with

Standard of Practice 3.2

not in compliance with

Summarize the basis for this finding:

GK has developed and implemented procedures to manage empty cyanide boxes and bags. GK prevents the re-use of empty cyanide boxes by logging them upon receipt and after delivery to the mixing area, as well as by weekly inventory checks to ensure all boxes are accounted for. GK does not return any cyanide containers to the vendor. GK decontaminates empty bags and boxes by decontamination with ferrous sulfate solution. The decontamination water is rinsed with fresh water to the sump in the mixing secondary containment where it is automatically pumped to the detox tank for disposal. GK ships empty bags and boxes annually for incineration to a hazardous waste management company permitted by the Bulgarian government. GK tracks shipping and disposal in a tracking logbook and with shipping manifests. The auditor reviewed logbooks, checklists, and manifests from throughout the audit period to verify compliance.

GK has developed and implemented procedures to prevent exposures and releases during cyanide unloading and mixing activities. The procedures have not changed since the 2015 and 2018 audits except for P-3.2.5.1 for mixing cyanide which was modified in 2019 to include addition of red dye to high-strength cyanide solution. The operation of valves and couplings for mixing solid cyanide is addressed in the P-3.2.5.1. Handling cyanide containers without rupturing or puncturing is addressed in the P-3.2.2.1 for use of the forklift and P-3.2.3.1 for use of the electrical stacker. Boxes are not stacked in the warehouse. P-3.2.5.1 addresses the timely clean-up of spills of cyanide during mixing. P-3.2.5.1 addresses the proper personal protective equipment (PPE) for mixing and requires observation from a safe distance by the shift foreman who remains in contact with the control room operator by cell phone. The PPE for the mixing operator consists of a hooded suit (like Tyvek), rubber boots, hard hat, rubber gloves, and full-face respirator. The auditors observed a mixing event to verify compliance with the PPE and observation requirements, as well as the addition of red dye.

8.0 PRINCIPLE 4 – OPERATIONS

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

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

in full compliance with

The operation is

in substantial compliance with

Standard of Practice 4.1

not in compliance with

Summarize the basis for this finding:

The cyanide facilities have not changed since the 2015 and 2018 audit cycles and are as follows:

- Cyanide storage warehouse
- Mixing area – mixing tank and storage tank for high-strength cyanide
- Leaching (or CIL) area – one agitator column and five CIL columns
- Elution and carbon regeneration area – elution (stripping) tank, copper stripping tank, carbon regeneration machine and filter press, one carbon attrition silo, one activated carbon silo, and one carbon fines tank
- Cyanide destruction area – one column for the sulfur dioxide and air (Inco) process
- Appurtenances – pipes, pumps, sumps, containments, etc. associated with the above facilities

There are two cyanide addition points for high-strength cyanide solution:

- Agitator column
- Elution tank

The following facilities are not cyanide facilities because GK has designed and operated the plant to limit the effluent concentration from the cyanide destruction circuit to less than the Code limit of 0.5 mg/l WAD cyanide:

- Pipeline from cyanide destruction area to day pond
- Day pond
- TSF
- Pipelines to and from the TSF (slurry and reclaim)

GK provided WAD cyanide data from the internal laboratory for samples collected from April 2019 to June 2022 at five locations:

- Destruction circuit effluent (3 times per day). Maximum value WAD cyanide = 0.495 mg/l. Six minor and isolated exceedances of the 0.5 mg/l limit of 0.537, 0.640, 0.670, 0.612, 0.537, and 0.610 mg/l.
- Day pond influent (3 times per day). Maximum value WAD cyanide = 0.465 mg/l. Three minor and isolated exceedances of the 0.5 mg/l limit of 0.510, 0.572, and 0.541 mg/l.
- Day pond pool (once per day). Maximum value WAD cyanide = 0.420 mg/l. Four minor and isolated exceedances of the 0.5 mg/l limit of 0.510, 0.510, 0.510, and 0.510 mg/l.
- TSF influent (once per day). Maximum value WAD cyanide = 0.470 mg/l. Three outliers of 0.800 and one outlier of 0.920 mg/l were discarded from the dataset because logically the TSF influent concentrations

should not be higher than the day pond pool concentrations. No minor and isolated exceedances of the 0.5 mg/l limit.

- TSF discharge (once per day). Maximum value WAD cyanide = 0.190 mg/l. No minor and isolated exceedances of the 0.5 mg/l limit.

GK provided monthly total cyanide data from an external laboratory for samples collected from April 2019 to April 2022 at three locations. Assuming that all total cyanide exists as WAD cyanide, total cyanide concentrations less than the 0.5 mg/l limit means that WAD cyanide concentrations are also less than this limit:

- Destruction circuit effluent. Maximum value total cyanide = 0.430 mg/l.
- Day pond pool. Maximum value total cyanide = 0.282 mg/l.
- TSF discharge. Maximum value total cyanide = 0.050 mg/l.

Taken together, the internal and external cyanide data support the exclusion of the day pond, TSF, and their associated pipelines from the list of cyanide facilities. The same conclusion was reached in the 2015 and 2018 audit cycles.

The crushing, milling, gravity concentration, and thickener circuits are also excluded from the list of cyanide facilities because GK stated that these facilities use freshwater rather than process solution.

GK has developed written management and operating plans or procedures for cyanide facilities that align with relevant Directives of the European Union, including the Strategy for Preventing and Limiting the Consequences of Major Accidents, Monitoring Plan, Safety Report, and Major Accident Prevention Policy.

GK has developed plans and procedures identifying the assumptions and parameters on which facility design was based and any applicable regulatory requirements as necessary to prevent or control cyanide releases and exposures consistent with applicable requirements. A Safety Report and two permits contain the key assumptions and parameters: the European Commission Integrated Pollution Prevention and Control (IPPC) Permit and the European Commission Seveso Permit (where Seveso is a town in Italy rather than an acronym). The key limits are:

- HCN gas: 1.0 milligrams per cubic meter (mg/m^3)
- Cyanide dust: $5.0 \text{ mg}/\text{m}^3$
- Groundwater: 0.05 mg/l total cyanide
- Surface water (discharge from the TSF): 1.0 mg/l total cyanide and 0.1 mg/l free cyanide

The key operating parameters are as follows:

- Mixing: 25% cyanide with a pH of 10.5 to 12.0
- Leaching: pH of 10.5 to 12.0 and 160 mg/l free cyanide at the agitator addition point
- Detox: pH of 8.5 and $<0.5 \text{ mg}/\text{l}$ WAD cyanide in the effluent
- Elution: sodium hydroxide of 1%, pH >11.0 , and free cyanide of 0.1%

GK has developed a set of standard operating procedures (SOPs or procedures) that describe the practices for the safe and environmentally sound operation of the cyanide facilities. These practices include specific measures for compliance with the Code, such as water management, inspections, and preventive maintenance activities. The instructions that accompany the procedures are detailed with the following sections: purpose, object, definition, roles responsibilities, methodology, health and safety, and revision, and checklists/inspection forms.

GK has implemented a management of change procedure to determine if changes may increase the potential for cyanide releases and worker exposures, and has incorporated measures, as necessary, to protect worker health and safety and the environment. A change analysis form addresses worker protection, environmental protection, fire and explosion, storage, materials handling, process equipment, services and utilities, and location. The auditor reviewed three completed management of change forms for the recertification period that were signed by various managers, including plant, engineering, safety, and environment.

GK has cyanide management contingency procedures for non-standard operating situations that may present a potential for cyanide exposures and releases. GK does not have any cyanide facilities with solution or water permanently present where a water balance would reduce the risk of exceeding the design containment capacity. GK has developed three contingency procedures addressing non-standard operating situations with the potential for cyanide exposures and releases during: (1) receiving, unloading, storing, and mixing cyanide, (2) leaching (includes detox), and (3) elution. GK has developed a procedure that describes the measures in the event of temporary cessation of operations. Sections address stoppages shorter than 3 months and stoppages longer than 3 months. For shorter stoppages, the plant is shut down and inspections and monitoring of the cyanide facilities continue unchanged. For longer stoppages: (1) cyanide in the warehouse will be returned to the vendor, (2) high-strength solution will be disposed by an authorized hazardous waste company and the mixing and storage tanks will be cleaned by a speciality company, (3) process solution from leaching and elution will be detoxified in the destruct circuit and tanks and columns will be cleaned by a speciality company, and (4) the destruct column will be cleaned last with solutions and rinse water disposed in the TSF. Inspections and monitoring will continue without change during and after draining and cleaning.

GK has inspected the warehouse, mixing area, and process areas throughout the recertification period using a set of 11 checklists that cover tanks, columns, secondary containments, pipelines, pumps, fans, and valves. GK conducted non-destructive testing in 2022 on the following columns: agitation, CIL #1 to #5, and detox. These columns were in acceptable condition except the detox column. GK added metal plates where the wall thickness was most affected, followed by removing rust and repainting the entire column. GK does not have any leak detection and collection systems, nor does GK have any ponds or impoundments classified as cyanide facilities.

GK has inspected the cyanide facilities on an established frequency that is sufficient to ensure and document that they are functioning within design parameters. The frequency varies from per event to shift, weekly, and monthly. The inspection forms include the date (and shift if applicable), the name of the inspector, and deficiencies noted. Once an inspection has identified a deficiency, a non-conformity form is generated by maintenance staff. Each non-conformity form includes a description of the deficiency, an analysis of the cause, and the completion of the corrective action. Each step on the form is dated and signed by the maintenance staff responsible for that step.

GK documented inspections on paper copies until approximately mid-2020. After mid-2020, inspections were documented digitally in Excel files. The auditor reviewed samples of both paper and digital versions from throughout the recertification period to verify that the operation has retained its inspection records.

GK has implemented a preventative and corrective maintenance program to ensure that equipment and devices function as necessary for safe cyanide management. The program covers mechanical, electrical, and instrumentation equipment and devices. Maintenance is scheduled annually based on duration (rather than run-time). Mechanical maintenance covers pumps, fans, pipes, tanks, columns, and others. Electrical maintenance covers power supply and the electrical components of pumps, fans, and others. Instrumentation covers pH

meters, HCN monitors, level sensors, and others. The auditor reviewed examples of spreadsheets, logbooks, non-conformity forms from throughout the recertification period to verify compliance.

Power management to prevent unintentional releases and exposures has not changed since the 2015 and 2018 audits. The plant has an electric yard that is supplied by two power lines from independent sources, as shown on electrical diagrams. Only one line is in use at any one time, with the second as backup. The switch over from one source to the other takes a few minutes and has been practiced annually during the recertification period, as documented in a logbook. In the unlikely event that both power sources failed, the plant is designed to shut down and fluid circulation ceases.

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

in full compliance with

The operation is

in substantial compliance with

Standard of Practice 4.2

not in compliance with

Summarize the basis for this finding:

GK has implemented a program to evaluate cyanide use in the mill and adjust the addition rate to minimize its use. In the first half of the recertification period, GK continued to receive ore from the Chala Mine. The cyanide addition rate for this ore of approximately 300 mg/l free cyanide has been well-established since the plant began operations in 2011. The Chala Mine closed in approximately mid-2020 and GK started receiving ore from the Sedefche Mine. In 2020, GK contracted with a consultant to perform bottle roll tests on the Sedefche ore. GK has adopted an addition rate of 160 to 220 mg/l free cyanide for the Sedefche ore. GK manually measures free cyanide hourly at the addition point at the agitator. The control room logbook showed a free cyanide addition rate of 164 mg/l at the time of the site tour. The metallurgical testing program notwithstanding, the primary method to minimize cyanide in tailings is the destruction circuit. GK has consistently destroyed cyanide throughout the recertification period such that the day pond and TSF are not cyanide facilities.

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

in full compliance with

The operation is

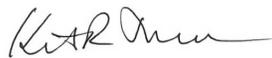
in substantial compliance with

Standard of Practice 4.3

not in compliance with

Summarize the basis for this finding:

This Standard of Practice is inapplicable because GK does not have any cyanide facilities that would require a water balance to protect against unintentional releases. It should be noted, however, that the day pond is a concrete vault with two full-time operators and therefore does need a water balance to prevent unintentional releases, which in any case would not be a cyanide-related incident because the day pond is not a cyanide facility. In addition, the TSF does have a water balance that is implemented to prevent unintentional releases, but any such release would not be a cyanide-related incident because the TSF is not a cyanide facility.



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

in full compliance with

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

Summarize the basis for this finding:

This Standard of Practice is inapplicable because GK does not have any open waters where WAD cyanide exceeds 50 mg/l. The cyanide destruct circuit at the plant has effectively prevented WAD cyanide concentrations greater than 0.5 mg/l during the recertification period. This Standard of Practice is also inapplicable because GK does not have a heap leach facility.

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

in full compliance with

The operation is in substantial compliance with **Standard of Practice 4.5**
 not in compliance with

Summarize the basis for this finding:

GK has a direct discharge to surface water at the TSF. Decant return water discharges into a ditch at the toe of the TSF and then flows to a wetland before reaching the Arda River. There is no mixing zone. GK samples the water in the ditch for daily analysis of free and WAD cyanide at their internal laboratory. An external laboratory samples the water monthly for analysis of free and total cyanide. The maximum results from both laboratories were below 0.5 mg/l WAD cyanide during the recertification period, assuming that all total cyanide exists as WAD cyanide. Free cyanide concentrations measured by both laboratories were below 0.022 mg/l during the recertification period except for one minor and isolated value measured by the internal laboratory in May 2022 of 0.048 mg/l.

GK does not have an indirect discharge to surface water, nor have indirect discharges caused cyanide concentrations in surface water to rise above levels protective of a designated beneficial use for aquatic life. Therefore, GK is not engaged in any remedial activity.

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

in full compliance with

The operation is in substantial compliance with **Standard of Practice 4.6**
 not in compliance with

Summarize the basis for this finding:

GK has implemented specific water management measures to protect the groundwater beneath and immediately downgradient of the plant. The primary measure to protect groundwater is cyanide destruction which has resulted in low cyanide concentrations in the day pond, pipelines, and TSF such that these are not classified as cyanide facilities. Other measures to protect groundwater include installing pipelines and vessels in the plant over concrete floors and constructing the day pond out of concrete, along with groundwater monitoring at the plant.

The GK Environmental Manager stated there are no actual beneficial uses for groundwater in the vicinity of the plant because reservoirs upstream from the plant on the Arda River provide ample water supply for various public uses. GK itself obtains water for industrial use from the upstream Kardzhali Dam on the Arda River. Nonetheless, GK staff stated that the IPPC Permit for the plant specified a limit of 50 micrograms per liter (µg/l), or 0.05 mg/l, for total cyanide in groundwater.

The direction of the groundwater gradient at the plant is south to south-southwest towards the Arda River and the water table is approximately 3 m below ground surface.

GK has installed three monitor wells at the plant that are upgradient, downgradient, and cross-gradient from the cyanide facilities. These monitor wells have been sampled twice yearly throughout the recertification period and analyzed by an external laboratory in accordance with the IPPC Permit, which requires total cyanide analysis every 5 years (i.e., 2015 and 2020). The results for all three wells were non-detect for total cyanide in 2015 at <0.005 mg/l. The second well was dry for the 2020 sampling event and the other two wells were non-detect for total cyanide at <0.005 mg/l.

GK does not use mill tailings as underground backfill.

GK has not caused cyanide concentrations in groundwater to rise above the prescribed standard. Therefore, GK is not engaged in any remedial activity.

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

in full compliance with

The operation is

in substantial compliance with

Standard of Practice 4.7

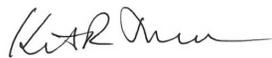
not in compliance with

Summarize the basis for this finding:

The cyanide facilities and measures to prevent or contain releases from cyanide-related tanks, vessels, containments, and pipelines have not changed since the 2015 initial audit and the 2018 recertification audit. The auditor observed these measures to be in good condition during the current site visit. Therefore, the previous findings are still valid and repeated below with minor edits.

Spill prevention and containment measures are provided for all cyanide unloading, storage, mixing and process solution tanks. Secondary containments are present for the cyanide mixing and storage tank, the agitator and CIL columns, detox tank, and the elution area.

Secondary containments for cyanide mixing, storage, and process tanks are sized to hold a volume greater than that of the largest tank and any piping draining back to the tank.



All secondary containments are equipped with sumps with automatic pumps that collect any cyanide solution or cyanide contaminated water and send it to the detox tank.

Because there are no tanks without secondary containment, procedures for remediation of contaminated soil are not needed, although GK has developed such procedures.

All cyanide process solution pipelines are contained within the mill building and would report to the respective sumps of the area they are related to.

There are no cyanide pipelines that present a risk to surface water and therefore no evaluation for special protection need is necessary.

All cyanide containing tanks and pipelines are made of carbon steel, stainless steel, black tin, or high-density polyethylene (HDPE), and are therefore compatible with cyanide and high pH conditions.

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

in full compliance with

The operation is

in substantial compliance with

Standard of Practice 4.8

not in compliance with

Summarize the basis for this finding:

There have been no changes to the cyanide facilities since the 2015 initial audit and the 2018 recertification audit. Therefore, the previous findings are still valid and repeated below with minor edits.

Quality control and quality assurance programs were implemented during the construction of new cyanide facilities and when modifications have been made to existing cyanide facilities.

There is evidence of QA/QC control during construction of the following facilities: mill building, including all tanks and pipes, and for mixing and reagent storing, CIL and leaching, detox as well as the elution area.

The QA/QC programs addressed the suitability of materials and adequacy of soil compaction for earthworks such as tank foundations and liners, and for construction of cyanide storage and process tanks.

Where no actual proof of QA/QC was available, GK provided the auditors with declaration of conformity by independent engineers indicating that for these facilities their continued operation within established parameters will protect cyanide exposures and releases - this was done for the day pond, the cyanide warehouse, and earthworks/civil works undertaken during plant refurbishment.

Appropriately qualified personnel reviewed the cyanide facility construction and provided documentation that the facility was built as proposed and approved, where appropriate.

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

in full compliance with

The operation is

in substantial compliance with

Standard of Practice 4.9

not in compliance with

Summarize the basis for this finding:

GK has developed a Monitoring Plan and procedures for the plant site that includes air, groundwater, surface water, wastewater, soil, and waste. These documents were developed by appropriately qualified personnel before the initial audit in 2015, including the plant quality engineer (a degreed mining engineer), the plant ecologist (a degreed chemical engineer), and the plant environmental manager (a degreed mining engineer). GK has contracted with an external laboratory to sample and analyze the water samples. This laboratory is certified by the Bulgarian Accreditation Service and uses protocols and standards developed by the International Organization for Standardization (ISO) and the European Trade Commission.

The Monitoring Plan specifies the sample identification, containerization, volume, preservation, decontamination, handling, chain-of-custody, and shipping protocols, as well as the cyanide species to be analysed. GK provided figures and a map showing surface water and groundwater monitoring locations.

GK has documented sampling conditions and procedures. The external laboratory chain-of-custody and field forms note weather and other conditions that might affect sample integrity. The GK internal field sampling logbooks note similar items.

GK has monitored surface water and groundwater at frequencies adequate to characterize the medium being monitored and to identify changes in a timely manner. Locations representing surface water are sampled by the internal laboratory each shift or daily, and by the external laboratory monthly, even though they are not considered cyanide facilities. Groundwater is sampled at the plant monitoring wells every six months, although in accordance with the IPPC permit, cyanide analysis is only required every 5 years. GK does not have any open waters that are cyanide facilities where wildlife monitoring would be required under the Code, although GK has monitored wildlife as a best practice.



9.0 PRINCIPLE 5 – DECOMMISSIONING

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

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

in full compliance with

The operation is

in substantial compliance with

Standard of Practice 5.1

not in compliance with

Summarize the basis for this finding:

GK has developed a written procedure to decommission cyanide facilities when operations cease. Because the cyanide facilities have not changed since the 2015 and 2018 audits, the original decommissioning documents are still valid. The auditor verified that the procedure includes an accurate list of the cyanide facilities to be decommissioned. The procedure states that all equipment in contact with cyanide solutions will be washed prior to dismantling with the wash water detoxified in the cyanide destruction circuit and disposed at the TSF. The procedure also states that unused chemicals will be returned to the supplier or surrendered for further disposal to an appropriately certified company for disposal.

GK does not anticipate the need for installation of remediation measures for groundwater or surface water as part of site closure.

GK has developed an implementation schedule in text form for decommissioning activities. The general timeframes described in the procedure and the detailed sequencing information for each piece of equipment in the cost estimate are the equivalent of a schedule.

GK has reviewed its decommissioning documents for cyanide facilities during the life of the operation and revised them as needed. The Objectives section of the detailed planning document states that the plan will be reviewed and updated without requiring a set frequency. The Environment Manager stated that she annually reviews the decommissioning documents, but because the cyanide facilities have not changed, the decommissioning have not needed changes.

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

in full compliance with

The operation is

in substantial compliance with

Standard of Practice 5.2

not in compliance with

Summarize the basis for this finding:

GK has estimated the cost to fully fund third party implementation of the cyanide-related decommissioning. The unit costs are based on the 2021 national rates for equipment and labor published by a national organization for building construction, and therefore represent third-party implementation. Electricity costs based on 2021 rates

are included. The line items are specific to each piece of cyanide related equipment and the activities to wash them and take them apart. GK commissioned a consultant to prepare the cost estimate in conjunction with the Construction Manager.

GK has updated its decommissioning cost estimate for cyanide facilities in 2022 for the current audit cycle. The auditors observed the previous 2015 cost estimate and the current 2022 cost estimate to verify compliance. The update period was longer than 5 years because the current audit was postponed due to the pandemic. The 2022 cost is 2.2 times higher than the 2015 cost.

GK has established a financial mechanism as required by the applicable jurisdiction to cover the estimated costs for the cyanide-related decommissioning. The GK exploitation and closure concession is an additional agreement to the contract issued by the Ministry of Economics and Energy and includes the obligation for GK to open a bank account to cover rehabilitation costs. The General Manager stated that GK has two bank deposits: one for the Chala Mine now undergoing closure and another for the Sedefche Mine now producing ore. The General Manager also stated that these accounts cover the plant site as well as the mine sites. GK is current on both bank deposits. The total amount in both accounts is 2.5 times greater than the 2022 decommissioning cost.

10.0 PRINCIPLE 6 – WORKER SAFETY

Protect workers' health and safety from exposure to cyanide.

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

in full compliance with

The operation is

in substantial compliance with

Standard of Practice 6.1

not in compliance with

Summarize the basis for this finding:

GK has developed procedures that describe how cyanide-related tasks such as unloading, mixing, plant operations, entry into confined spaces, and equipment decontamination prior to maintenance should be conducted to minimize worker exposure. Procedures cover the warehousing activities (transport, loading, and unloading) and the processing activities (mixing, leaching, detox, and elution). In addition, GK has developed procedures for working in confined spaces and decontamination before maintenance and repairs. These procedures require the use of PPE and address pre-work inspections. PPE consists of:

- Warehouse: overalls, steed-toed boots, hard hat, rubber gloves, half-face respirator
- Mixing: hooded suit (like Tyvek), rubber boots, hard hat, rubber gloves, full-face respirator
- Leaching, destruction, elution: overalls, steed-toed boots, hard hat, rubber gloves, dust mask

The auditor observed signage with the required PPE, the operators using the required PPE, and completed pre-work inspections from throughout the recertification period.

GK has solicited and actively considered worker input in developing and evaluating health and safety procedures. GK has installed a suggestion box on the first floor of the Admin building, but the Safety Manager stated no suggestions were received this audit cycle. The Safety Manager stated that GK has established a Working Conditions Committee where meetings this audit cycle have included worker input into the type of rubber gloves, dust masks, and overalls to purchase. GK has held quarterly safety meetings, as required by Bulgarian law, with a required agenda that includes chemical risks (cyanide) and cyanide first aid. The Safety Manager specifically asked workers whether they had input into procedures during the fourth quarter 2022 safety meeting with no input reported. The auditor reviewed sign-in lists for these meetings from throughout the recertification period to verify compliance.

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

in full compliance with

The operation is

in substantial compliance with

Standard of Practice 6.2

not in compliance with

Summarize the basis for this finding:

GK has established the appropriate pH for limiting the evolution of HCN during mixing and production activities as follows:

- Mixing: 10.5 to 12.0
- Leaching and carbon absorption: 10.5 to 12.0
- Detox: 8.5 to 9.0
- Elution: >11.0

GK has relied on hourly manual titrations at four locations to implement the pH targets. The auditor reviewed the pH logbooks in the plant laboratory and mixing checklists to verify the pH targets have been met throughout the recertification period with only minor and isolated excursions.

GK has identified the vehicle gate, cyanide warehouse, mixing area, and leaching-detox-elution areas as the areas of concern for HCN or cyanide dust exposure. GK has developed procedures that require use of administrative controls, engineering controls, and appropriate PPE in these areas and/or when performing cyanide-related activities. In lieu of an HCN monitor at the cyanide warehouse, GK has prescribed that operators must open the warehouse door, wait 15 minutes, and then check the HCN levels with a portable monitor before entering. GK has installed fixed HCN monitors at the other four locations. The auditor observed the fixed monitors to have both visual and audible alarms, as well as readouts showing the units were functioning. GK has three alarm levels with associated actions:

- **Level I.** In the presence of 20% of the maximum allowable concentration for damage to the working environment, equal to 2 parts per million (ppm), a light signal is turned on to alert the operators, but no actions are taken.
- **Level II.** In the presence of 40% of the maximum allowable concentration for damage to the working environment, equal to 4 ppm, a light signal, sound alarm, and forced ventilation (where installed) are turned on.
- **Level III.** In the presence of 75% of the maximum allowable concentration for damage to the working environment, equal to 7.5 ppm, a light signal, sound alarm, and forced ventilation (where installed) are turned on and the cyanide supply in the process is immediately stopped. If the exposure 75% of the working environmental harmful concentration of 7.5 ppm continues for more than 10 minutes, the operators leave the area immediately. If exposure continues for more than 15 minutes, actions are taken according to the emergency plan.

GK also has two Dräger portable HCN monitors for use by the operators. One is kept by the leaching shift supervisor and one is kept by the warehouse supervisor. These portable monitors alarm at 10 ppm with an audible alarm and flashing light and signal the need to evacuate.

GK has maintained, tested, and calibrated the fixed and portable HCN monitors throughout the recertification period and retained the records. GK has contracted with Dräger Safety Bulgaria to calibrate the four fixed and two portable monitors every 6 months following Dräger's procedures. The calibration certificates showed the actual calibration data.

GK has placed warning signs where cyanide is used advising workers that cyanide is present, that PPE must be worn, and that smoking, open flames and eating and drinking are not allowed. The Safety Manager inspects the signage monthly to ensure it is intact and legible, as evidenced by completed inspection forms from throughout the recertification period.

GK has dyed high-strength cyanide solution red for clear identification since 2019. The mixing procedure specifies two packets of dye are to be added to ensure the high-strength solution is visibly red at the addition point. The auditor reviewed checklists from throughout the recertification period that indicated red dye has been added during mixing. The auditor also observed the high-strength solution at the addition point in the agitator was red.

GK has located shower/eyewash stations and fire extinguishers at strategic locations throughout the operation. The auditor checked randomly selected shower/eyewash stations to verify they were functioning, and that the eyewash pressure was low. The auditor reviewed shift inspection checklists and mixing checklists from throughout the recertification period to verify they were inspected regularly. The auditor randomly checked fire extinguishers to verify that they were dry powder and that their tags for monthly visual inspections were current. GK has also contracted with a specialist contractor for annual testing and maintenance, as evidence by records.

GK has labelled cyanide-related tanks, columns, vessels, and piping to alert workers of their contents and the direction of flow in the pipes. High-strength cyanide solution pipelines have red insulation and black flow direction arrows. Operators have been trained that red solution means high-strength cyanide solution. Other pipelines were adequately labelled, and the frequency of labelling was sufficient.

Safety Data Sheets are available in Bulgarian at five locations in the plant site, as well as on the GK computer system.

GK has implemented a procedure to investigate and evaluate cyanide exposure incidents to determine if the operation's programs and procedures to protect worker health and safety and to respond to cyanide exposures are adequate or need to be revised. The Bulgarian government requires the use of an incident reporting form that, according to the Safety Manager, also constitutes the procedure. The Safety Manager stated that there were no cyanide-related incidents this audit cycle but provided a 2019 incident report for a physical injury to verify the investigation procedure has been followed.

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

in full compliance with

The operation is

in substantial compliance with

Standard of Practice 6.3

not in compliance with

Summarize the basis for this finding:

GK has water, oxygen, and the means of communication readily available for use at the warehouse and plant. Water is available throughout the plant at showers and eyewash stations. GK has two medical oxygen bottles with breathing masks to resuscitate victims that are not breathing (in lieu of resuscitators). GK has two Scott self-contained breathing apparatus (SCBAs). The auditor inspected this equipment to verify it was functional. GK has cell phones, landlines, and an emergency speaker system as means of communication during an emergency. As with the previous audits, the Safety Manager stated that GK has decided to not provide antidotes because of issues with importation into Bulgaria and because the travel time to the nearby Atanas Dafovski Hospital is 5 to 10 minutes.

GK has inspected its first aid equipment regularly to ensure that it is available when needed. The auditor reviewed monthly checklists from throughout the recertification period for inspections of the emergency response and first aid equipment. In addition, the Safety Manager has inspected the loudspeaker system annually throughout the recertification period.

GK has developed a written procedure to respond to cyanide exposures. This procedure covers first aid measures for cyanide exposure via inhalation, ingestion, dermal contact, and eye contact. The measures are similar for all exposure routes and consist of notification, decontamination with water as needed, and application of medical oxygen as needed.

GK has its own on-site capability to provide first aid or medical assistance to workers exposed to cyanide. The Safety Manager stated that at least three emergency response team (ERT) members are available on each shift and that a doctor from the nearby Atanas Dafovski Hospital visits the site two days per week for medical monitoring.

GK has developed a procedure to transport workers exposed to cyanide to locally available qualified off-site medical facilities. This procedure is shown in a flowchart in the Internal Emergency Plan (IEP) wherein GK would call "112" (the Bulgarian equivalent of "911" in the United States) to mobilize an ambulance to the site. The Safety Manger stated that an ambulance would take approximately 5 minutes to arrive and that the Atanas Dafovski Hospital is 5 to 10 minutes away.

GK has a formal arrangement with the local Atanas Dafovski Hospital. GK has a 2022 letter from this hospital referencing the Code and stating they can treat cyanide exposure victims at the hospital. The Safety Manager stated that the hospital has amyl nitrite antidotes for treating cyanide-exposure victims.



11.0 PRINCIPLE 7 – EMERGENCY RESPONSE

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

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

in full compliance with

The operation is

in substantial compliance with

Standard of Practice 7.1

not in compliance with

Summarize the basis for this finding:

GK has developed an IEP that covers major disasters and emergencies. The IEP is supported by three operating instructions that specifically address cyanide exposures and releases during (1) loading, transport within the site, unloading, and mixing; (2) leaching (includes detox); and (3) elution. GK has also developed a scenario document that describes possible cyanide-related accident scenarios as follows:

- Scenario 1: Accident and/or incident with a vehicle carrying sodium cyanide (NaCN)
- Scenario 2: Spillage of NaCN during cargo - unloading activities with NaCN and transport within the industrial park
- Scenario 3: Spillage of NaCN solution due to valve, pipeline, or tank leaks and ruptures
- Scenario 4: Formation of HCN during unloading, storage, and preparation of the solution
- Scenario 5: High NaCN pulp spill
- Scenario 6: Release of HCN due to problems with pH control
- Scenario 7: Casing overflow due to extreme rain or snowmelt
- Scenario 8: Breakage of a tailings pipe outside the TSF
- Scenario 9: Scenario 9: Increased infiltration from or around the TSF

Between the IEP, operating instructions, and scenario document, GK has addressed the potential cyanide failure required scenarios under Standard of Practice 7.1, as appropriate for its site-specific environmental and operating circumstances. However, the scenarios related to the TSF, pipelines, and their appurtenances are inapplicable, strictly speaking, because they are not cyanide facilities.

GK takes ownership of the cyanide at the site gate. An accident during transport outside of the gate is the responsibility of the producer and transporter, both of which are certified under the Code.

GK has developed documents that include the appropriate factors for planning response to onsite transportation-related emergencies. Such an emergency could happen with the transporter's truck travelling from the gate to the warehouse, as well as during GK's transport of individual boxes from the warehouse to the mixing area. These routes within the site are addressed in two procedures. The emergency actions are appropriate for solid sodium cyanide in boxes being transported by a highway truck, unloaded by forklift, and moved by forklift on the flat roads within the site.

GK has addressed specific response actions, such as clearing site personnel and potentially affected communities from the area of exposure, in the incident procedures for transportation, loading, unloading, and mixing; leaching (including detox); and elution. A site evacuation would be announced on the loudspeaker system for the industrial park. Site evacuation routes and muster points are shown in figure in Appendix 2.2 to the IEP

and signs for evacuation routes and muster points are in place in the plant. If an emergency potentially involved the nearby community, GK would call “112” (the Bulgarian equivalent of “911” in the United States) and the Kardzhali authorities would take over the response, including community evacuation.

GK has addressed the use of cyanide antidotes and first aid measures for cyanide exposure in a procedure for rendering cyanide first aid. This procedure describes decontamination and the use of medical oxygen. Medical antidotes are not held by GK due to issues with importing such medicines into Bulgaria and the company has decided that they will treat cyanide exposure victims with oxygen. The GK Safety Manager stated, however, that the Atanas Dafovski Hospital has amyl nitrite antidotes for treating cyanide exposure victims.

GK has addressed the control of liquid and solid releases at their source in the incident instructions for transportation, loading, unloading, and mixing; leaching (including detox); and elution.

GK has addressed the containment and future prevention of releases in the incident instructions for transportation, loading, unloading, and mixing; leaching (including detox); and elution. The monitoring plan and procedure for sampling address assessment and mitigation.

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

in full compliance with

The operation is

in substantial compliance with

Standard of Practice 7.2

not in compliance with

Summarize the basis for this finding:

GK has involved its workforce and external stakeholders, including potentially affected communities, in the cyanide emergency response planning process on an ongoing basis. The workforce has had opportunities to be involved via regular meetings and drills. The other occupants of the industrial park have had opportunities to be involved via annual receipt of the IEP and invitations to mock drills. GK has hosted site inspections five times per year by a local non-governmental organization (NGO) called the Public Council of Kardzhali.

GK has made the potentially affected communities aware of the nature of their risks associated with accidental cyanide releases and has consulted with them. The community has had opportunities to be involved primarily via the fire department’s activities. An abbreviated version of the IEP is available to the public on the GK website. GK has not identified a spill to the Arda River as likely to affect Kardzhali’s water supply because a reservoir upstream of the site is the source of water for Kardzhali.

GK has identified external entities having emergency response roles and involved those entities in the cyanide emergency response planning process. GK has identified the ambulance service and fire department as the external entities with defined roles in onsite emergency response. GK considers any response by the ambulance service as within their normal duties and not requiring any specific involvement in the planning process. The fire department has been involved via its annual review of the IEP, annual inspections, participation in mock drills, and informal meetings. Other external entities, such as civil defense, police, and the town of Kardzhali, would be made aware of their offsite roles via a link to the IEP provided by the fire department.

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

in full compliance with



The operation is in substantial compliance with **Standard of Practice 7.3**
 not in compliance with

Summarize the basis for this finding:

GK has addressed the required cyanide-related elements in the IEP and supporting procedures. Section I.4.1 of the IEP identifies a management team of four engineers and managers with authority to commit resources. Appendix 1.10.13 to the IEP lists the 10-member plant emergency team and their contact information. Section IV of the IEP states that periodic drills for probable situations must be conducted and requires emergency training. Call-out procedures are explained in Section III of the IEP. Section II.1 of the IEP includes a table describing duties and responsibilities. The lists of the management team and emergency team in Section I.4.1 and I.4.2, respectively, also describe the actions for which they are responsible. Section II.6 of the IEP contains a list of the emergency and first aid equipment and their storage locations. A separate procedure assigns responsibility and frequency for inspecting emergency and first aid equipment.

The roles of the fire department, ambulance, police, hospital, and communities are described in the IEP and an appendix. The fire department and ambulance are the only external entities with onsite roles to help control releases and pick up victims for transport, respectively. The hospital's offsite role is to treat victims. The offsite roles of civil defense, police, and the town of Kardzhali are traffic control and community evacuation, if needed.

GK has confirmed that external entities with roles and responsibilities identified in the IEP are aware of their involvement. The fire department is aware of their onsite role via its annual review of the IEP, annual inspections, participation in mock drills, and informal meetings. The Atanas Dafovski Hospital is aware of its offsite role via the 2022 letter they sent to GK. Other external entities, such as civil defense, police, and the town of Kardzhali, would be made aware of their offsite roles via a link to the IEP provided by the fire department.

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

in full compliance with

The operation is in substantial compliance with **Standard of Practice 7.4**
 not in compliance with

Summarize the basis for this finding:

GK has included procedures and contact information for notifying management, regulatory agencies, external response providers and medical facilities of a cyanide emergency in the IEP. A flow chart in the IEP shows the procedures and contact information for first notifying management, the ministry of internal affairs, emergency medical assistance, and the municipality of Kardzhali, followed by notification to the river basin directorate and other government agencies. The IEP also contains instructions and contact information for notifying the municipality of Kardzhali, who would then be responsible for notifying other entities such as external response providers. GK has also installed amplifiers and loudspeakers around the industrial park to notify the other members of the industrial park.

The Safety Manager and Environment Manager stated that the same managers responsible for liaising with the authorities (i.e., the GK Director and the GK Security Manager) would be responsible for communications with the media, if needed.

GK has a procedure for notifying the ICMI of any significant cyanide incidents, as defined in ICMI's Definitions and Acronyms document. The IEP includes this requirement, along with the contact information for the ICMI and the list of significant cyanide incidents. The Safety Manager stated that GK has not had any significant cyanide incidents this audit cycle that would have required reporting.

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

in full compliance with

The operation is

in substantial compliance with

Standard of Practice 7.5

not in compliance with

Summarize the basis for this finding:

GK has described specific remediation measures as appropriate for the likely cyanide release scenarios in the procedure for actions in the event of accidents during transportation, loading, unloading, and mixing. However, the Environment Manager stated that these measures apply equally to releases from leaching or elution. This procedure describes standard measures applicable to any release, such as establishing a perimeter, and contains specific measures for recovery of solutions or solids, decontamination of soils or other contaminated media, and management and disposal of spill clean-up debris. The endpoint concentration for cleaning up spills to soil is 0.5 mg/kg WAD cyanide. Recovery involves using sorbents if needed, picking up spilled materials (manually for lesser amounts, mechanically for larger amounts), removing affected materials, and placing these materials in containers. Neutralization is not considered. Decontamination covers tools and equipment used in cleanup with disposal of rinse water in the cyanide destruction circuit. Clean-up materials, whether liquid or solid, are also disposed in the cyanide destruction circuit. The Safety Manager stated that bottled drinking water is used at the industrial park. The Environment Manager stated the drinking water supply for the municipality of Kardzhali is a reservoir on the Arda River located upstream of the site such that it could not be affected by a cyanide incident.

GK has prohibited the use of sodium hypochlorite, ferrous sulfate, and hydrogen peroxide to treat cyanide that has been released into surface water or that has the potential to reach surface water. Section IV of the procedure for actions in the event of accidents during transportation, loading, unloading, and mixing contains this prohibition.

GK has addressed the potential need for environmental monitoring in the procedure for sampling in the event of a hazardous substance incident. This procedure covers both spills to soil and to water and states that sampling locations to determine the nature and extent of the impacts would be determined by the GK Director of Production and the Bulgarian Environmental Protection Agency. Soil sampling instructions are detailed, including sampling depths, volumes, mixing, and containerization. Water sampling procedures are similarly detailed with the sampling depth below the water surface, volumes, preservation, and containerization. The analytes, methods, and laboratory requirements would be determined in accordance with the site's monitoring plan.

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

in full compliance with

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

Summarize the basis for this finding:

GK has reviewed and evaluated the IEP annually, as required by Bulgarian law. An appendix to the IEP specifies the review and evaluation steps with the final step being approval by GK's Board of Directors. GK provided the 2019, 2020, 2021 versions of the IEP as evidence of updating. Moreover, the IEP was updated twice in 2022 in preparation for, and in conjunction with, the recertification audit.

GK has conducted six mock cyanide emergency drills annually during the recertification period with scenarios defined in a safety report required under Bulgarian law, meaning there is a regulatory expectation that these established scenarios be practiced regularly. The drills have covered solid, liquid, and HCN releases and associated notification, response, and cleanup measures. GK has rotated ERT members through various shifts such that all ERT members participated in the drills. The industrial park occupant nearest the warehouse has been annually invited to the drill simulating a forklift accident with a solid cyanide spill.

GK conducted an additional drill in October 2022 that:

- Addressed the entire response process from callout to closeout
- Covered release of high-strength cyanide solution within containment with cyanide exposure via inhalation and dermal contact and two injured operators
- Evacuated plant workers
- Practiced application of worker decontamination in the safety showers and application of medical oxygen
- Simulated ambulance response by having a company car stationed at the hospital, which then drove to the plant after receiving the simulated call for assistance
- Documented response times

The drill report documented evaluation of training, equipment, and response procedures. Three corrective actions were assigned to the Safety Manager with a deadline at the end of December 2022.

GK has implemented provisions to evaluate and revise the IEP, as necessary, following mock drills and following an actual cyanide-related emergency requiring its implementation. An appendix to the IEP contains the requirement for review after mock drills in Section 1.4 and the requirement for review after incidents in Section 2.2. The Safety Manager stated that post-drill reviews have occurred without modifications and that no cyanide related incidents or accidents have occurred this audit cycle that would have required an update.

12.0 PRINCIPLE 8 – TRAINING

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

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

in full compliance with

The operation is

in substantial compliance with

Standard of Practice 8.1

not in compliance with

Summarize the basis for this finding:

GK has trained all personnel who may encounter cyanide in cyanide hazard recognition. All staff receive the presentation “General Safety Instruction” as an introduction to physical safety hazards; site signage (e.g., hazards, PPE); and site prohibitions (e.g., no smoking areas). Warehouse and plant staff receive cyanide hazard recognition training via the presentation “Training for Working with Hazardous Substances”. This presentation addresses the physical appearance of cyanide, cyanide health effects and lethal dose, symptoms of cyanide poisoning, and exposure response actions, among other topics. Visitors or contractors that enter the cyanide facilities receive the same cyanide hazard recognition training as warehouse and plant operators.

GK has retained cyanide hazard recognition training records. The auditor reviewed attendance lists for “Training for Working with Hazardous Substances” from throughout the recertification period to confirm annual refreshers. The auditor spot-checked a recent attendance list to confirm that a new control room operator in-training had received his initial cyanide hazard recognition training. The auditor interviewed a leaching shift foreman, leaching operator, control room operator, and plant laboratory technician to verify they had annually received the cyanide hazard recognition training. The auditor also reviewed records for the contractors involved in maintaining the detox column in 2022.

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

in full compliance with

The operation is

in substantial compliance with

Standard of Practice 8.2

not in compliance with

Summarize the basis for this finding:

GK has trained workers to perform their normal production tasks, including unloading, mixing, production, and maintenance, with minimum risk to worker health and safety and in a manner that prevents unplanned cyanide releases. Under Bulgarian law, operators must be trained quarterly using a standard agenda that includes reviewing procedures relevant to their roles. GK uses their procedures for the warehouse and plant as the training materials. Within each procedure, there is a specific instruction and duties for each job description: supply manager, warehouse manager, supply/warehouse operators, shift supervisors, reagent operators, leaching operators, elution operators, and control room operators.

Task training has been provided by qualified senior staff. The shift foremen provide the task training under the direction of the Deputy Plant Director. The Deputy Plant Director has 17 years of experience and a degree from the University of Mining and Geology in Sofia, Bulgaria. The shift foremen have 5 to 11 years experience, as well as university or industrial school degrees.

GK has trained employees prior to working with cyanide. Induction consists of general safety training, cyanide hazard recognition training, and pollution prevention training. Induction is followed by task training and shadowing a senior operator on the day shift for 6 months. At that time, the shift foreman and Deputy Plant Director observe and evaluate the employee's performance. If acceptable, the employee is approved to work independently and on other shifts.

GK has provided refresher training on cyanide management to ensure that employees continue to perform their jobs in a safe and environmentally protective manner. Under Bulgarian law, operators must be trained in a quarterly safety meeting using a standard agenda that includes reviewing procedures relevant to their roles.

GK has evaluated the effectiveness of cyanide training by testing and observation. The Deputy Plant Director stated that cyanide task training effectiveness is observed on the job by the shift foremen and the Deputy Plant Director. The Deputy Plant Director stated that effectiveness (or rather the lack of effectiveness) is documented by exception using the human resources process. If an operator is observed to be deficient, the Deputy Plant Director writes a report to the Plant Director and the operator is given an opportunity to respond. Escalating corrections include a verbal warning, a one-time fine and a written warning, and termination.

GK has retained task training records. The quarterly procedure briefings are documented in logbooks (required under Bulgarian law) back to 2011 when operations started, thus providing records throughout an individual's employment. These records have included the names of the employee and the trainer. The Deputy Plant Director stated that the procedure briefings take place in the first 10 days of each quarter, and therefore the logbooks record the dates by quarter. The topics covered are listed in a standard agenda required under Bulgarian law, which includes the procedure briefings, as well as review of cyanide risks and first aid. The sign-in sheet includes a column to indicate whether an operator's understanding was adequate or inadequate. Operators demonstrated acceptable understanding during the auditor's interviews.

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

in full compliance with

The operation is

in substantial compliance with

Standard of Practice 8.3

not in compliance with

Summarize the basis for this finding:

GK has trained all cyanide unloading, mixing, production and maintenance personnel trained in the procedures to be followed if cyanide is released, including decontamination and first aid procedures. Operators are responsible only for notifying the shift foreman or manager if cyanide is released, although if it is safe to do so, an operator may assist a conscious, mobile victim. The ERT is responsible for dealing with the releases and victims. Notification procedures for cyanide releases and exposures, as well as decontamination and first aid, are

explained in the presentation “Training for Working with Hazardous Substances”. The presentation on “Environmental Pollution Prevention” includes procedures for responding to spills in general. A consulting doctor provides annual first aid/responder training, which includes cyanide first aid. The auditor interviewed a leaching shift foreman, leaching operator, control room operator, and plant laboratory technician to verify they had annually received these trainings.

GK has trained the ERT in the procedures included in the IEP regarding cyanide, including the use of necessary response equipment. In addition to the hazardous substance and pollution prevention training mentioned in the previous paragraph, the ERT receives additional training on SCBAs, medical oxygen cylinders, fire protection, and rescue equipment. The six annual mock drills also qualify as training for the ERT in emergency and spill response procedures. Finally, the ERT receives the annual first aid/responder training taught by a consulting doctor, which includes cyanide response. The auditor interviewed a leaching shift foreman and leaching operator that are ERT members to verify they had annually received the trainings discussed above.

GK has made external responders familiar with those elements of the IEP related to cyanide. The fire department is aware of their onsite role via its annual review of the IEP, annual inspections, participation in mock drills, and informal meetings. The Atanas Dafovski Hospital is aware of its offsite role via the 2022 letter they sent to GK. Other external entities, such as civil defense, police, and the town of Kardzhali, would be made aware of their offsite roles via a link to the IEP provided by the fire department.

GK has regularly conducted refresher training for response to cyanide exposures and releases. Training schedules for 2019 to 2022 show annual training for cyanide exposures and releases. Records and interviews indicated the training has taken place as scheduled.

GK has retained records throughout the recertification period that documents the cyanide emergency response training, including the names of the employee and the trainer, the date of training, the topics covered, and how the employee demonstrated an understanding of the training materials. The attendance records contain the operator’s names, trainer’s name, and date of training. The topics covered are inherent in the name of each training. The training forms includes a column to indicate whether an operator’s understanding was adequate or inadequate. Operators demonstrated acceptable understanding during the auditor’s interviews.

13.0 PRINCIPLE 9 – DIALOGUE

Engage in public consultation and disclosure.

Standard of Practice 9.1: Promote dialogue with stakeholders regarding cyanide management and responsibly address identified concerns.

in full compliance with

The operation is

in substantial compliance with

Standard of Practice 9.1

not in compliance with

Summarize the basis for this finding:

GK has provided stakeholders with information on its cyanide management practices and engaged with them regarding their concerns. The GK website is the primary method to inform and engage stakeholders. Stakeholders can contact GK using the “Contacts” tab has the operation’s physical address, a location map, phone number, fax number, and a cell phone number for submitting messages. The Environment Manager also stated that the operation has an open-door policy and that the security staff at the truck gate know to call her if they are approached by stakeholders. The auditor reviewed a complaints logbook maintained by the Environment Manager, but there were no complaints registered this audit cycle.

GK hosts public meetings and solicits input in conjunction with permitting activities. These meetings are announced on the GK website and contain contact information for the Environment Manager. Most of the permitting activities this audit cycle were in towns near mining areas rather than near the plant. However, a 2019 announcement did solicit written statements and opinions regarding the proposed increase in throughput at the plant in association with the Sedefche orebody.

The local fire department makes annual inspections. The Safety Manager stated that those reports are available to the public upon request to the fire department via the link “dox.bg”.

GK has hosted site inspections five times per year by a local NGO called the Public Council of Kardzhali. This NGO oversees GK’s permits and publishes reports that are available on the GK website under the tab “Protocols of inspections Gorubso-Kardjali” for the years 2020, 2021, and 2022.

The Safety Manager stated that GK annually provides a flash drive with the IEP to the other occupants of the industrial park. Because one occupant is located near the warehouse, GK has informed them of mock drills at the warehouse in 2019, 2020, 2021, and 2022, as stated in drill reports.

GK hosted tours for students from the university in Kardzhali in 2020 and 2021, as evidenced by their signed safety induction forms.

The Environment Manager stated that the other agencies provide a mechanism for the public to obtain information, such as Regional Inspectorate of Environment and Water, the Bulgarian Labor Directorate, the East Aegean Water Basin Directorate, the Municipality of Kardzhali, and the Ministry of Water and Environment.

Standard of Practice 9.2: Make appropriate operational and environmental information regarding cyanide available to stakeholders.

in full compliance with

The operation is

in substantial compliance with

Standard of Practice 9.2

not in compliance with

Summarize the basis for this finding:

GK has developed written descriptions of how their activities are conducted and how cyanide is managed that are available to the public and other stakeholders. The “Activities” tab on the GK website (<https://gorubso.bg/>) includes a brief description of processing activities at the plant, as well as photographs of the plant. Information on the Code is available at the GK website at the tab “Company Policies”. An abbreviated version of the emergency plan is also available for the public to download at the tab “Information on Planned Safety Measures”. Section 3 of this abbreviated emergency plan contains a detailed description of the processing facilities and use of cyanide in gold extraction.

The “Global Data” website (<https://www.globaldata.com/data-insights/macroeconomic/literacy-rate-in-bulgaria/>) indicated that the literacy rate in Bulgaria was 97.5% in 2021 and therefore the need for verbal dissemination of information is low. Nonetheless, GK has disseminated information verbally during site inspections and tours.

GK has made information publicly available confirmed cyanide release or exposure incidents on their website at the tab “Information on Planned Safety Measures”. A sub-tab “Information About Incidents That Have Occurred” has a downloadable table of incident information for 2018 to 2021 (2022 data being not yet available). The rows in the table correspond to the reporting categories under Standard of Practice 9.2. This table contains “0” for all years and all categories, as GK has not had any significant cyanide incidents this audit cycle.

Johnejack

