





ICMI INITIAL CERTIFICATION **AUDIT GOLD MINING OPERATION SUMMARY AUDIT REPORT** MINERA YANAQUIHUA, S.A.C. **DISTRITO YANAQUIHUA** PROVINCIA DE CONDESUYOS DEPARTAMENTO AREQUIPA, **PERÚ** 

**Submitted to: International Cyanide Management Institute (ICMI)** 1400 I Street, NW - Suite 550 Washington, DC 20005, USA



Lead Auditor Jorge Efrén Chong Pérez geosoluciones@cwpanama.net +507-6737-8282



MINERA YANAQUIHUA, S.A.O

Name of Mine

March 16-18, 2014 & July 24-25, 2015



	TABLE OF CONTENTS	Page
A- GENERAL SUMMA	RY	4
	e Audited Operation	
	Finding	
A.3 Installation and F	reparation Assembly – Cyanide Preparation	o <b>n Tank</b> 11
B- ROLE AS CYANIDE	MINING OPERATION	11
General Guidance		
Principle 1, Production		
• Standard of Pr	ractice 1.1	11
Principle 2, Transportati	on	
• Standard of Pa	ractice 2.1	12
• Standard of Pr	ractice 2.2	
Principle 3, Handling and	l Storage	
<ul> <li>Standard of President</li> </ul>	ractice 3.1	15
• Standard of Pr	ractice 3.2	18
Principle 4, Operations		
• Standard of Pr	ractice 4.1	22
• Standard of Pr	ractice 4.2	25
• Standard of Pr	ractice 4.3	26
• Standard of Pr	ractice 4.4	32
<ul> <li>Standard of President</li> </ul>	ractice 4.5	33
<ul> <li>Standard of Property</li> </ul>	ractice 4.6	34
• Standard of Pr	ractice 4.7	35
• Standard of Pr	ractice 4.8	36
• Standard of Pr	ractice 4.9	37
Principle 5, Decommissio	ning	
• Standard of Pr	ractice 5.1	39
• Standard of Pr	ractice 5.2	40
	1 8 .0 0.	
MINERA YANAQUIHUA,	S.A.C. March 16-18, 201	4 & July 24-25, 2015
Name of Mine		Date



Principle 6, Worker Safety	
• Standard of Practice 6.1	
• Standard of Practice 6.2	43
• Standard of Practice 6.3	45
Principle 7, Emergency Response	
• Standard of Practice 7.1	48
• Standard of Practice 7.2	52
• Standard of Practice 7.3	55
• Standard of Practice 7.4	57
• Standard of Practice 7.5	58
• Standard of Practice 7.6	59
Principle 8, Training	
• Standard of Practice 8.1	60
• Standard of Practice 8.2	61
• Standard of Practice 8.3	62
Principle 9, Dialogue	
• Standard of Practice 9.1	63
• Standard of Practice 9.2	64
• Standard of Practice 0.3	6/



#### A- GENERAL SUMMARY

### **A.1 Information of the Audited Operation**

Name of Mine: Minera Yanaquihua, S.A.C.

Name of Mine Owner: <u>Minera Yanaquihua, S.A.C.</u> Name of Mine Operator: <u>Minera Yanaquihua, S.A.C.</u>

Name of Responsible Manager: Pavel Gálvez

Address Office: Avenida Paseo de la Republica N° 5809, Miraflores.

State/Province: Country: Lima/ Perú

Telephone: +511- 241-2069 E-Mail: pgalvez@mysac.com.pe

#### (CERTIFICATION AUDIT)

#### Mine location and description of operation:

Minera Yanaquihua, S.A.C. (MYSAC), is located in the Condesuyos Province, Department of Arequipa, in the Republic of Peru; under the regional government of Arequipa.

It is located at 2,700 meters above sea level, to the southeast of Peru. The operation comprises a CIP plant, processing about 120 Tons of ore per day.

Road access is achieved to Yanaquihua from Arequipa through Corire, Aplao, Chuquibamba Yanaquihua, detour to Ispacas and Field Camp and Processing Plant Alpacay, making a total of approximately 191.38 miles. The road is paved from Arequipa to Chuquibamba; the rest to Alpacay is affirmed.





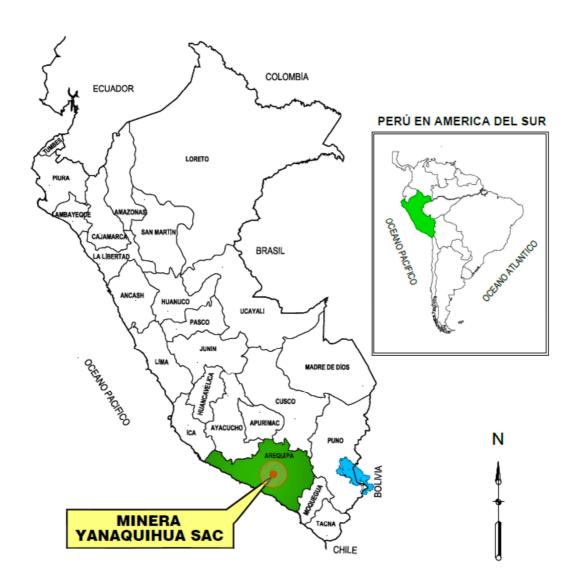
MINERA YANAQUIHUA, S.A.C.

Lead Auditor

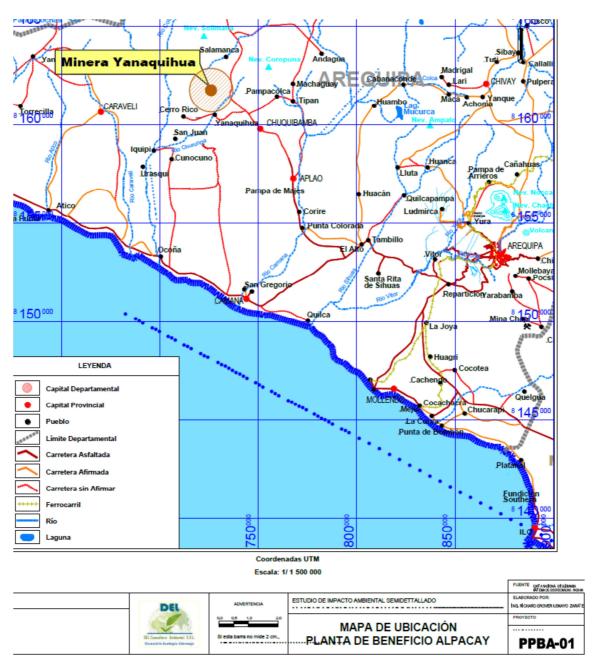
March 16-18, 2014 & July 24-25, 201



Map Location - Access







Regional Geology: Consists of intrusive rocks of granodiorite composition - tonalite from the Coast Upper Cretaceous Batholith - Lower Tertiary (According with Cedimin S.A., 1986) and Tiabaya Super Unit, from Upper Cretaceous (according INGEMMET 1994). On these intrusive rocks, sequences of sedimentary and volcanic rocks were deposited during the Tertiary and recent Quaternary and are represented for the Moquegua Formation from



Upper Tertiary - Pliocene Volcanic Sencca, from Tertiary Upper Middle Pliocene and Volcanic Barroso (Upper Tertiary - Pleistocene).

<u>Local Geology</u>: The area of MYSAC operations, is comprised mainly of intrusive granodiorite rock along the entire operation, but is also found in the northwest tonalite intrusive rock formations. Additionally, in the northeast of the operation are volcanic rocks from the Sencca Formation, which consists of a set of volcanic pyroclastic rocks, besides rhyolitic tuff with biotite. The rocks that make up this formation are essentially pyroclastic composed of dacitic tuffs and rhyodacites whose predominant color is gray. The presence of Consuelo geological fault, which SE strike, reaches the central area of the operation.

#### Process flow Sheet

At a Yanaquihua mining unit Minera Yanaquihua, SAC, (MYSAC) exploits a mineralized gold deposit using the underground mining method of mineralized structures. The ore obtained is processed in the Processing Plant called "Alpacay" with capacity of 150 Tons per day (TPD). The treatment process consists on using sodium cyanide diluted in agitation tanks, the final product is a gold concentrate, the generated tailings are discharged in tailings dam No. 3, built with geomembrane coverage to prevent infiltration of the final solution.

The concentrated form of activated carbon is sent to Lima, for refining and marketing.

In the crushing process the ore is placed on an ore stock field, previously analyzed by the central laboratory, afterwards, it enters a metallic hopper with capacity of 55 ton (short). The hopper supplies the crushing section through an 18 in x 16.4 ft. belt conveyor. The ore is grinded through an 8x10 in. jaw crusher until a size  $4 \sim 5$  in. separating the fine residues with a vibrating grid  $0.80 \times 3.3$  ft and  $\frac{1}{2}$  in of light.

The ore from the hopper is carefully measured with a 12" x 3.5 m conveyor belt with recycled water from the tailing dam and 35% solid concentrated mineral. The milling process includes a 4'x5' ball mill and a 4'x 3' mill and the resulting pulp is sent to a hydrocyclone by a pump.

The resulting product of the mill is of approximately 106 microns and will be classified by the hydrocyclone so that more that 80% of the resulting product may go to the agitation tanks.

The ½ product will be transported by an 18" x 39.4 ft. conveyor belt to fine hopper with 20 metric tons capacity.

MINERA YANAQUIHUA, S.A.C.

Name of Mine

March 16-18, 2014 & July 24-25, 2013



The concentrate and tailings enters a worm-like densifier for separation, the tails returns to the ball mill and the fines or (resulting product) are sent back to the hydrocyclone, thus completing the grinding process.

The primary grinding section has a 6 feet ball mill. The leach process involves adsorption tanks of 12 sq. ft. each.

MYSAC semi-detailed Environmental Impact Report, prepared on January of 2013 mentioned that were designed two tailing dams: A 148,321.6 cubic foot of capacity Tailing Dam N°1 for the metallurgical process and oxide tailings and also a Tailing Dam N°2 with future storage capacity of 501,468.3 cubic foot for sulfide tailings storage, but were not implemented.

Only a process final Tailing Dam N°3 was implemented with storage capacity of 5,049,997cubic foot. Studies determined that its working life expectancy will be of 4.5 years because production to date has been oscillating between 80 and 120 TMD. The main priority of the project is oxide treatment and a flotation circuit for the treatment of accumulated sulfide.

#### Leaching and Adsorption

The hydrocyclone over flow over 80% of -200 mesh (0.074 mm) feed the leach tank where it is dosed with NaCN in a continuous agitation with a retention time of approximately 36 hours, subsequently the pulp enters into adsorption tanks 1024.125 cubic foot capacity, of in which the means to capture the rich mineral is activated, in a proportion of 1.25 lb./foot<sup>3</sup> and stirred coal.

Activated charcoal is moved counter currently to the pulp, so that the crop is effected coal charged in the first tank and the addition of new coal is performed the last tank.

The activated carbon will move in opposite direction to the pulp, thus, the first tank will harvest charged carbon and the addition of new carbon will be in the last tank.

The gold dissolved by cyanide is immediately retained by the carbon that has a gold/carbon charge and the pulp is removed using 20 mesh sieves. In order for that to happen the pulp is poured onto the sieves through valves located at the bottom of the tanks.

The gold dissolved by cyanide is immediately retained by the carbon that has a gold/carbon charge and the pulp is removed using 20 mesh sieves. In order for that to happen the pulp is poured onto the sieves through valves located at the bottom of the tanks.

MINERA YANAQUIHUA, S.A.C.
Name of Mine



In the process the pulp travels from tank to tank and the activated carbon retained in the sieve is poured onto the previous tank in opposite direction to the pulp.

Tailings Reservoir

The tailing deposit of the plant oxidation process is Tailing Dam No. 1, which has been expanded, serves as a tail process deposit and to treat the oxide ore. The soil was preconditioned and then covered with a geomembrane over its entire surface which meets the technical requirements for toxic waste storage.

Stability Studies were conducted to both, the expansion of Deposit N° 1 and the design of Deposit N° 2, according to the requirements of "Resolución Directorial" (R.D.) No. 440-96 EM / DGM for the compliance of S.D. No. 016-93, Articles 20, 29, 37 and 43 of The Environmental Protection Regulation of Mining Activities in Peru.

MINERA YANAQUIHUA, S.A.C.

ine Lead Audi

March 16-18, 2014 & July 24-25, 201



#### A.2 Overall Auditor's Finding

The auditor validated the March 2014 audit visiting the mine during operations in July 24 and 25, 2015. Samples of documents were reviewed on site, other received by e-mail.

This operation	1S
----------------	----

✓	In full compliance
	in substantial compliance
	not in compliance

with the International Cyanide Management Code.

Audit Company: Geosoluciones Panamá

Technical & Leader Auditor: Jorge Efrén Chong Pérez

Email: geosoluciones@cwpanama.net

Dates of Audit: March 16-18, 2014 & July 24-25, 2015

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

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

MINERA YANAQUIHUA, S.A.C
Name of Facility

Lead Auditor

March 16-18, 2014 & July 24-25, 2015

Date

MINERA YANAQUIHUA, S.A.C.

Name of Mine

March 16-18, 2014 & July 24-25, 20



#### A.3 Installation and Preparation Assembly - Cyanide Preparation Tank

The first cyanide in Big Bag packing transportation will be the last week of April.

The cyanide preparation tank is already installed in the Metallurgical Plant. However, it has not begun operation because the distribution pipes of cyanide solution are still in fabrication and also the connections of those pipes to the leaching tanks. The cyanide preparation tank will start operation the 1st week of May.

#### **B- ROLE AS CYANIDE MINING OPERATION**

PRINCIPLE 1, PRODU	CTION: 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.
The operation is	✓ in full compliance with
	☐ in substantial compliance with ☐ not in com
Summarize the basis for th	uis Finding/Deficiencies Identified:
QUIMTIA), a cyanide wa CITSSA S.A.C. (herein	oly contract with QUIMTIA, S.A. (hereinafter called as rehouse distributor, and transportation contract with the company after called as CITSSA); both are International Cyanide
Management Institute (IC	
	rg/signatory-company/quimtia-sa rg/signatory-company/tamse-transportes-sudamericanos-sac

MINERA YANAQUIHUA, S.A.C.

Name of Mine

Lead Auditor

Date

The selected cyanide will comes from Australian Gold Reagents Pty Ltd., Australia (hereinafter called as AGR) with its plant in Petrochemical Complex Kwinana, Western

Australia.



The AGR was initially ICMI Certified during October 2007 and the last re-certified during March 2014.

http://www.cyanidecode.org/signatory-company/australian-gold-reagents

Minera Yanaquihua, S.A.C. will purchase it at AGR, a Code certified facility.

The first purchase of 1 ton boxes of cyanide has been programmed for April 2016. The process will start through a new tank of increased capacity designed and manufactured by Fabricators and Technology SAC. This will consequently eliminate the use of 50kg cyanide cylinders.

QUIMTIA, a cyanide distributor for AGR, will be the cyanide supplying company of the project. It has provided proper documentation of the packing list, certificate of analysis and insurance coverage.

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

<u>Standard of Practice 2.1</u> .	: Esta	ıblısh cl	ear lines oj	t respo	nsibility for	safety, seci	ırıty,	release
	prev	ention,	training	and	emergency	response	in	written
	agre	ements	with produ	cers, a	listributors c	ınd transpo	rters.	
Γhe operation is								
	$\checkmark$	in full o	compliance	with				
		in subs	tantial com	plianc	e with St	andard of F	racti	ce 2.1
		not in c	ompliance	with				

Summarize the basis for this Finding/Deficiencies Identified:

The packages are in compliance with the United Nations and local authorities; this requirement has been agreed upon "Adherence Agreement" signed between QUIMTIA, MYSAC and CITSSA.

The containers are properly labeled in English and Spanish before arriving to the mine.

QUIMTIA, S.A., a Code signatory member, had its warehouse facility certified April 8<sup>th</sup>, 2014.



CITSSA LOGISTICS, S.A.C., the company assigned for transport performed a route evaluation.

The cargo arrives at the port of "El Callao", and then it will transport by chain of custody, and shipper/carrier waybills until MYSAC.

The cargo is transported from the Port to QUIMTIA's cyanide storage unit. Then, CITSSA, an ICMI certified transport company, will deliver the cargo directly to the mine without the need of any other interim storage.

CITSSA, a transport company certified by the Cyanide Code, is in charge of making the entire land transportation of the cargo.

The unload of cyanide in the mine, will be done by MYSAC, using suitable lifting equipment 3000 kg capacity (LiuGong-model CPCD30) and personnel trained in its use.

QUIMTIA has a safety program and also a preventive and corrective plan as ICMI Certified Company.

All drivers have been trained for hazardous materials handling. The convoy personnel are trained to provide emergency response in case of hazardous material spill and intoxication.

The cargo is monitored by GPS and escorted at all times.

All drivers have been trained for hazardous materials handling and emergency response.

There is a written agreement between MYSAC, QUIMTIA, and CITSSA, designating responsibility, the contract establishes AGR, a cyanide manufacturer, as the specific cyanide supplier.

MINERA YANAQUIHUA, S.A.C

Name of Mine

ead Auditor

March 16-18, 2014 & July 24-25, 201



<u>Standard of Practice</u>	2.2: Require that cyanide transporte emergency response plans and adequate measures for cyanide ma	capabilities and employ
The operation is		
	✓ in full compliance with	
	☐ in substantial compliance with	Standard of Practice 2.2
	□ not in compliance with	
Summarize the basis fo	or this Finding/Deficiencies Identified:	
QUIMTIA, S.A. cyani	de warehouse facility in Lima-Peru:	
http://www.cyanideco	de.org/signatory-company/quimtia-sa,	
and CITSSA LOGIST	ICS, S.A.C.:	
http://www.cyanidecod	le.org/signatory-company/tamse-transport	tes-sudamericanos-sac

are bound by an adhesion contract with MYSAC to be committed to the Code of Cyanide in its transportation requirements.

The certified transporters and supply chains involved in the transport of cyanide from the point it leaves the Australian Gold Reagents Pty Ltd. (AGR), Australia production facility to its final delivery at Minera Yanaquihua, S.A.C. are as follow:

• Transportation from <u>AGR's Kwinana production facility</u>, using rail and road transport to end user mine sites in Western Australia; as well as road transport to <u>Fremantle Port</u> for export supply. For export product this supply chain is up to and includes the stevedory operation at Fremantle Port.

Certification date on June 13, 2013. http://www.cyanidecode.org/signatory-company/australian-gold-reagents-ltd

• Transportation from From Fremantle, Western Australia to the Port of Callao, Peru via AGR's Ocean Freight Supply Chain; receipt and management of cyanide at the port, and truck transport from the port either directly to customer mine sites in Peru or first to Quimtia S.A.'s certified warehouse for storage and then to customer mine sites using certified carriers DCR Mineria y Construccion S.A.C. or CITSSA Logistics SAC. <a href="http://www.cyanidecode.org/signatory-company/australian-gold-reagents-ltd">http://www.cyanidecode.org/signatory-company/australian-gold-reagents-ltd</a>



 Transporter from QUIMTIA, S.A.C. Warehouse to Yanaquihua Mine (Peru): CITSSA Logistics SAC

MYSAC will introduce to the use of cyanide in one (1) ton big bag boxes. The documentation has been revised to apply for export from Australia of 100 metric tons of cyanide.

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

Standard of Practice 3.1:	Design and construct unloading, stoconsistent with sound, accepted eng control/quality assurance procedures containment measures.	ineering practices, quality
The operation is	<ul> <li>✓ in full compliance with</li> <li>□ in substantial compliance with</li> <li>□ not in compliance with</li> </ul>	Standard of Practice 3.1

Summarize the basis for this Finding/Deficiencies Identified:

The cyanide warehouse is located on a plain, occupying an area of approximately 645.8 sq. feet, and located 65.62 feet away from the Alpacay Plant. At the back of the facility, at approximately 6.6 feet. of height there is a slope with protection against erosion.

This storage unit was designed by "Administración y Gerencia en Minería y Construcción" (Mining and Construction Management) engineering firm. It was built with concrete floor and cement block walls.

The roof and doors are made of metal elements. It has natural ventilation through a wire mesh, as indicated in the drawings attached. A perimeter ditch was installed to minimize the risk of rainwater entering the premises. These designs have been submitted to the Environment Protection Authority of Peru as part of the documentation submitted by MYSAC, to get the approval for the daily processing of 150 TPD (tons per day).



Unloading and storage areas for solid cyanide are located away from surface water. As indicated in the storage drawings a perimeter ditch was installed to minimize the risk of rainwater entering the premises.

The plant supervisors' office is located besides the storage unit. A person might be there sporadically.

No liquid cyanide is involved or used in this operation. There are no liquid cyanide storage tanks used as part of the operation.

In all cyanide storage tanks were installed level indicators (levels sensor), including cyanide mix tank, which will place roof; to prevent overfilling.

The cyanide mixing tank is located on a concrete surface. A spill containment pond will built under it in case of emergency.

The secondary containment is concrete-built and located under the cyanide mixing tank. MYSAC prohibited cyanide handling during rains.

The cyanide warehouse has adequate ventilation to prevent accumulation of hydrogen cyanide gas.

The warehouse roof and floor are made of concrete to minimize contact with water.

MYSAC has perimeter security with access to authorized personnel only. There is a permanent entry/exit control to all the persons.

Additionally, the cyanide warehouse has doors with locks and controlled keys.

The warehouse stores no other materials such as: acids, strong oxidizers, explosives, food, animal feed or tobacco. A part of the warehouse is used for storing empty containers of detoxified cyanide.

MYSAC does no use liquid cyanide nor unloads tankers. Both, the mixing tank and the solution tanks used in this process have a secondary spill containment pond. The CYANIDE WAREHOUSE MAINTENANCE, TANKS, EQUIPMENT, PIPELINES, VALVES AND ACCESSORIES Procedure states spill prevention measures through the inspection of pipes, tanks, containment ponds and HCN level sensors.

MINERA YANAQUIHUA, S.A.C

Name of Mine

🔧 March 16-18, 2014 & July 24-25, 201



Findings of the performed inspections, including the cyanide warehouse inspection reports, are taken under corrective measures based on the Risk Assessment Matrix in accordance with the Peruvian Supreme Decree (D.S. 055-2010/EM), assigning values from which priority is given to corrections.

The secondary containments for mixing and process tanks are sized to hold a volume greater than of the largest tank and any piping draining back to the tank.

There is a spill containment of 2,751cubic feet of capacity around all seven processing tanks. The two largest tanks have a capacity of 5,403cubic feet each. The remaining five tanks have a capacity of 125.30 cubic feet each one.

The secondary containment system also includes another containment pond called "contingency pond" with additional capacity of 14,125 cubic feet, integrated to the containment system for tanks and mixing solution.

Within MYSAC maintenance program, regular pipelines and pump inspections are considered routine procedures in order to prevent and eliminate leaks to the environment. As soon as a leak is detected, it is repaired and registered as closed, in accordance with the corrective action indicated in the report.

All tanks and pipelines are constructed of materials compatible with cyanide and high pH conditions, using metal elements and PVC pipes.

During construction and subsequent modifications to its facilities, MYSAC has carried out a QA / QC program of storage units and cyanide mixing.

Certified engineering firms have made the drawing of the facilities as well as detailed technical studies.

Through "Directorial Resolution No. 014-202-EM/DGM" MYSAC was granted operation authorization for the Alpacay Plant, the complementary facilities, water use and the corresponding discharges.

In addition to this, MYSAC has implemented operating procedures called "Procedimiento de Evaluación de Trabajo Seguro" (PETS for its Spanish Acronym) Safety Job Assessment Procedure for some critical control processes in operation.

MINERA YANAQUIHUA, S.A.C.

ame of Mine

March 16-18, 2014 & July 24-25, 201



For the cyanide storage facilities quality controls were considered in both its design and execution taking into account the ground/underground conditions and the structure weight.

MYSAC, maintains records of QA / AC applied in the cyanide facilities for the storage and mixing.

ADGEMINCO qualified personnel reviewed cyanide storage and mixing facility construction and provided documentation that the facility has been built as proposed and approved.

In addition MYSAC, operation storage and mixing cyanide facilities have been assessed by a suitably qualified person, Iván Arroyo professional mining engineer, to determine if they have been constructed as indicated on the ADGEMINCO design drawings, and may continue to operate with existing procedures.

Standard of Practice	3.2: Operate unloading, storage and inspections, preventive maintenance prevent or contain releases and worker exposures.	ce and contingency plans to
The operation is		
	<ul> <li>✓ in full compliance with</li> <li>□ in substantial compliance with</li> <li>□ not in compliance with</li> </ul>	Standard of Practice 3.2

Summarize the basis for this Finding/Deficiencies Identified:

MYSAC established 12-PETS-ACVC procedure where empty containers are taken to a designated site within the cyanide warehouse, where they stay protected and safe after been washed.

The empty containers stored in the warehouse are periodically transferred to PETRAMAS, SAC, a company with permission from the Ministry of Health for the final disposal of solid waste granted through the "Directorial Resolution"  $N^{\circ}$  4618-2008/DIGESA/SA of November  $7^{th}$ , 2008.

Interview was conducted to William Carpio, warehouse since August 15, 2011 and Samuel Ramirez leach-man since 2012, confirming that empty containers treatment is performed.



They state that with the recent ICMI implementation, the workers feel safer to do a job, and were increasing the training program.

Empty containers transferred to PETRAMAS, SAC, are made by the company EDEWIT by reference guides for chain of custody control. EDEWIT was granted permission by the Peruvian government to transport materials and waste substances. "Resolución Directorial 076-2015 MTC/16".

Empty containers and plastic bags are rinsed at least three times, adding the resulting rinsing water to the cyanidation process. As indicated in the Procedure 12 - PETS - ACVC.

Empty boxes are storage in a cyanide warehouse before being transferred to PETRAMAS for final disposal.

After cyanide residue is poured into the mixing tank, it is immediately washed with sodium hypochlorite and lime, inside and outside.

MYSAC does not use liquid cyanide.

10-PETS-called TCS is the new procedure designed by operations to transfer 1 ton boxes of cyanide to the new mixing tanks.

According to the actual procedure, all employees must wear all personal protective gear and equipment required in the process.

To minimize the risk of tearing or puncturing of the container, 2 Tons manual hoist equipment will be used connected to a bracket that holds the boxes with cyanide, and then, lift them to the mixing tank.

MYSAC meets the new Supreme Decree D.S. for mining activities N° 045-2013, section 9.6.2 f) which prohibits stacking more than three cylinders or containers, one above the other vertically. Only two boxes will be stack at the cyanide warehouse.

If a spill occurs during mixing, ordinal 12 from 12-PEM-DCS requires the activation of the emergency committee.

During manual mixing of solid cyanide, the person use full personal protective equipment, and there is always a second person watching from a safe area.

MINERA YANAQUIHUA, S.A.C.

Lead Audito

March 16-18, 2014 & July 24-25, 2015



MYSAC has established the following procedures:

08-PETS-DACS "Descarga y Almacenamiento de Cianuro de Sodio"-Unloading & Storage Sodium Cyanide.

10-PETS-TCS "Traslado de Cianuro de Almacén a Tanque de Preparación de Cianuro"-Cyanide transportation from MYSAC warehouse to Cyanide Preparation Tank.
10-PETS-MPCS "Manipulación y Preparación de Cianuro de Sodio"- Handling and Preparation of Sodium Cyanide.

11-PETS-MPTCS "Manipulación y Preparación en el Tanque de Cianuro de Sodio" - Handling and Preparation in Sodium Cyanide Tank.

12-PETS-ACVC "Almacenamiento de Cajas Vacías de Cianuro" - Empty Cyanide Boxes Storage.

In its structure objectives, scope, references, definitions, personal protective equipment, equipment / tools / materials, procedures and restrictions are considered.

The operation has developed procedures to detail the necessary standard practices such as inspections and preventive maintenance for the safe and environmentally sound operation.

14-PETS-MATET "Mantenimiento de Almacén de Cianuro de Sodio, Tanques, Equipos, Tuberías, Válvulas" - Sodium Cyanide Warehouse Maintenance, Tanks, Equipment, Pipes, Valves.

18-PETS-PMEDR "Programa de Mantenimiento de Equipos y Disposición de Residuos"-Equipment Maintenance and Waste Disposal Program.

19-PETS-MTDR "Mantenimiento de Tuberías y Disposición de Relaves" - Pipeline and Tailings Disposal Maintenance.

Pipelines and tailings site inspection procedure should be performed daily or as often as necessary rather than six times per month. Inspection should be performed several times a day during the rainy season (19-PET-MTDR).

Other systems such as cyanide mix tanks, valves and accessories are inspected ten times per month (14-PETS-MATET).

MINERA YANAQUIHUA, S.A.C.

Name of Mine

March 16-18, 2014 & July 24-25, 2015



The operation makes periodic inspections to the solutions process tanks. Some of the inspection records were reviewed, the parameters observed on the records under the inspection procedure (PETS-MATET 14) for verification of the structural integrity and signs of corrosion or leakage were shown.

As part of its regular inspections MYSAC includes the secondary containment and the drain valves control.

There is a Spill Collection System which is including on the drawings.

Based on the 14-PETS-MATET "Maintenance Warehouse sodium cyanide Tanks, Equipment, Pipes, and Valves" Procedure, MYSAC inspect pipes, pumps and valves, to identify and correct any signs of deterioration or leakage.

MYSAC makes periodic inspections to the solutions ponds and pipelines. Conditions such as available freeboard or integrity of water diversion are been considered as described in the inspection procedure (19-PETS-MTDR).

MYSAC keeps inspections records with dates, name of inspectors and non-conformities found. The corrective action plan and priorities needed are documented; the procedures (PETS) are defined and set for a three-year period which is the minimum period of time the facility is required to retain inspection records.

MYSAC has procedure 11-PETS-MTPCS, which considers the use of secondary containment called contingency pond "poza de contingencia." Any spill in the secondary containment will be piped to the main containment, before being pumped to the process.

MINERA YANAQUIHUA, S.A.C

Name of Mine

March 16-18, 2014 & July 24-25, 201



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

Standard of Practice 4.1:	Implement management and op-	perating systems designed to
	protect human health and contingency planning and maintenance procedures.	O
The operation is		
	✓ in full compliance with	
	☐ in substantial compliance with	Standard of Practice 4.1
	□ not in compliance with	

Summarize the basis for this Finding/Deficiencies Identified:

The operation has developed procedures for leach plant, tailings impoundments, and cyanide treatment, regeneration and disposal systems.

Other inspections and warehouse maintenance, tanks, equipment, valves, pipes and fittings, are performed every 15 days, according to record. Inspections are categorized as follow: 1-8 days to correct high risk issues 9 -15 for medium risk, and 16 -25 for low risk; depending on what state the risk matrix.

The operation performed metallurgical testing to optimize the consumption of cyanide, based on the ore characterization and gold grades obtained.

MYSAC has the study for the construction of Tailing Dam No. 3. It has 269 pages in describing safety factors for a safety operation, minimizing the risk of spills and exposures. This study also includes the dam capacity to store 100 years of rainwater without overflowing the crest.

The geotechnical evaluation section considers the rock quality: good to very good, as laboratory testing and recovery rock cores are indicated.

MYSAC has preventive inspection procedures, which include tanks, valves, pumps, pipes, emergency and tailings ponds. The plant, cyanide storage and water management inspection records were reviewed.



14-PETS-MATET "Mantenimiento de Almacén de Cianuro de Sodio, Tanques, Equipos, Tuberías, Válvulas". – Sodium Cyanide Warehouse Maintenance, Tanks, Equipment, Pipes, Valves"

18-PETS-PMEDR "Programa de Mantenimiento de Equipos y Disposición de Residuos". – Equipment Maintenance and Waste Disposal Program.

MYSAC maintains operational procedures and practice features to identify and correct an operating process that may increase the potential risk of cyanide spill. Every department staff responsible provides the inspection report to take the necessary measures through the <u>Safety Committee</u>. Additionally, the standard procedures establish updates whenever a supplier, customer or MYSAC employee decides it.

The Environmental Impact Assessment (EIA for its Spanish acronym) of MYSAC, a 194 pages document, states that between January and July is rainy season, but February is when the highest rainfalls are registered.

The Environmental Impact Assessment states that all health care centers in the surroundings must be previously notified to be prepared in case of accidents.

The Emergency Plan for Sodium Cyanide Use, Handling, Storage and Disposal of Hazardous Waste in Section 5.2.2 indicates the steps to follow in case of dam spill.

The procedure for "Solid Sodium Cyanide Spill, Solution and Pulp" establishes controls to follow on a spill situation, either by water balance problems or operational problems.

The operation inspect cyanide facilities on an established frequency sufficient to assure and document that they are functioning within design parameters.

In order to verify processes and bird mortality the operation performs daily inspections to the facility. Engineer Hernán Jimenez was assigned to exclusively coordinate everything related to ICMI System, including inspections and taking corrective actions.

Eleven inspection records and wildlife mortality & presence verification records have been reviewed in the last three months of 2016. The records confirm the appropriate nonconformities corrections.

MINERA YANAQUIHUA, S.A.C

Name of Mine

March 16-18, 2014 & July 24-25, 201



According to the records, some of the bird species spotted were: Columbina cruziana, Zenaida auriculata and Turgus chiguanco"; some pictures were taken.

On July 24 and 25, 2015 I performed field verification of facilities including the tailings.

In accordance with established procedures MYSAC inspects all storage and mixture areas.

14-PETS-MATET "Mantenimiento de Almacén de Cianuro de Sodio, Tanques, Equipos, Tuberías, Válvulas "Sodium Cyanide Warehouse Maintenance, Tanks, Equipment, Pipes, Valves".

18-PETS-PMEDR "Programa de Mantenimiento de Equipos y Disposición de Residuos". "Equipment Maintenance and Waste Disposal Program".

MYSAC inspects the integrity of the containment ponds, the presence of fluid, and its capacity. It insures the drainage valves are closed in order to prevent leakage to the environment.

The emergency ponds and leaching systems are inspected.

MYSAC inspects pipelines, pumps and valves for deterioration and leakage

Procedure 43-PETS-PGA states a procedure to ensure safety margins for excess water and water balance.

MYSAC within its inspections registers date, name of inspector, observations, date of correction, based on risk analysis.

The operation has a preventive maintenance programs and the activities are documented through PETS *Procedimiento de Elaboración de Trabajo Seguro* (PETS for its Spanish acronym) Safety Job Assessment Procedure.

MYSAC have two emergency power supply sources to operate pumps and other equipment. It is to prevent unintentional releases and exposures if by any situations its primary power source is interrupted, and implemented a testing and maintenance procedure PETS-OFGE-001 (April 12<sup>th</sup>, 2014) and PETS-MP-001 of power generation equipment to ensure backup operation. The frequency of the test is performed and recorded every 15 days by maintenance personnel and recorded in a log book.

MINERA YANAQUIHUA, S.A.C

ame of Mine

March 16-18, 2014 & July 24-25, 201;



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

The operation is			
•	✓	in full compliance with	
		in substantial compliance with	Standard of Practice 4.2
		not in compliance with	
		not subject to	
		•	

Summarize the basis for this Finding/Deficiencies Identified:

The operation conducts a program to determine appropriate cyanide addition rates in the mill and evaluate and adjust addition rates as necessary. This is accomplished through the verification of cyanide used per ounce of gold produced, reducing its use to 7.40 Kg of cyanide per ounce of gold retrieved in March 2014 compared to March 2013, when the consumption was 8.94 kg of cyanide per ounce of gold retrieved.

MYSAC has performed metallurgical testing in order to evaluate and determine with great accuracy the dose of cyanide to be used by the REPORT MYSAC 002-2014 LM where cyanide consumption testing is recorded per ton of ore.

MYSAC has implemented strategies to control cyanide addition. For example, the current residence time for 140 metric tons is 45 hours, it is recommended to increase time to 52 hours alongside the launch of the two agitator tanks located in unit.

To maintain low cyanide consumption is very essential to control in the bulk hopper blending areas controlling not exceeded more than 0.35% copper in the head.

In other cases the tests have indicated to avoid processing minerals with certain characteristics that prevent them from being treated with cyanide.

MINERA YANAQUIHUA, S.A.C.

ne of Mine Lead

March 16-18, 2014 & July 24-25, 201



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

The operation is		
•	<ul> <li>✓ in full compliance with</li> <li>□ in substantial compliance with</li> <li>□ not in compliance with</li> </ul>	Standard of Practice 4.3

Summarize the basis for this Finding/Deficiencies Identified:

MYSAC developed a water balance of the 150 TON per day for the process.

The environmental impact assessment for tailing dam, section 4 considers "Water Balance".

The return interval and duration of the referenced storm event is as follow:

#### **Peak Flows and Levels**

a. 24 Hour Maximum Precipitation

The value of the maximum 24-hour precipitation and 500 year return was selected.

P24 = 130.48 mm / day

The value of the maximum 24-hour precipitation and 100 year return: P24= 100 mm / day Duration / intensity curve was calculated.

MYSAC made a 222 pages report: SEMI-DETAILED ENVIRONMENTAL IMPACT STUDY (EIAsD) for the "MINING OPERATIONS EXPANSION TO 150 TMD OF Minera Yanaquihua Mine" PROJECT, in which aspects related to water balance and rainfall forecasting are discussed.

According to the water balance report of Minera Yanaquihua operational system, there is a balance between the system and the environment, meaning that there are no leaks or effluents in what goes in and recirculates. There is only water lost by evaporation in the system (tanks, tailings dam) due to temperature because of the dry or semi-arid climate.

A solution balance to help predict water performance under the climate conditions of the environment is necessary for proper water management entering MYSAC operations. For purposes of the water balance, the water inlets to be considered in operation are:

• Fresh water from Pinoc area

MINERA YANAQUIHUA, S.A.C. March 16-18, 2014 & July 24-25, 201:

Page 26 of 66



- Barren solution reclaimed water
- Daily rainfall (December to March)

The water outlets shall consist of:

• Evaporation of water in the circuit

#### Adding water to the circuit

According to the material balance, the points considered in the entry of water are:

- Water supply to the 6'x5' mill
- Download the mill 6'x5'mill
- Download the Denver mil
- Download the 4'x5' mill
- Direct precipitation

During most of the year the area has a dry climate. According to a monitoring station Yanaquihua has an average annual rainfall of 147 mm.

#### **Water Outlet**

Evaporation:

According to studies, an analysis was made of the evaporation in the country. The envelope curves related to altitude showed that evaporation increases. Yanaquihua area has a range of 2,650 mm annual average evaporation from 1,500 to 1,900 mm of water.

For purposes of calculation, the annual average of 1,912 mm was taken as reference from the Pampilla, Arequipa meteorological station.

This gives an annual average of daily evaporation of 5.23 mm.

#### Water retained in voids:

No water is retained during the process of the plant because no deposition from pulp is performed in the circuit.

#### Leaks:

The pulp circuit in the process plant is performed through pipes, which prevent any leakage into the process.

### **Transportation of tailings**

The pulp process to evacuate tailings dam is carried through pipelines. The data to be considered for this evacuation is the following

MINERA YANAQUIHUA, S.A.C.

ine Lead Audi

March 16-18, 2014 & July 24-25, 2015



#### **Retained water**

The resulting pulp density of the leaching tanks is 1,328 tons / m³ which gives us a solid percentage of 39.67%, this density to be discharged to the tailings deposit increases to 1.7 ton/m³ average.

The water released from the tailings is  $196.52 \text{ m}^3$  /day, the water retained in the tailings will be empty of  $31.62 \text{ m}^3$  /day, which is the 13.86% to  $228.14 \text{ m}^3$  /day.

#### Leaks

The whole base of this tailing deposit is waterproofed with a layer of geomembrane, which prevents any type of filtration in the area.

#### Water recirculation

For this calculation both precipitation and evaporation in the area are considered (the data of an average day). Also the data of the sludge field area is considered, the highest level (vessel) according to survey data is of  $26,500 \text{ m}^2$  and water mirror considering 15% of this area, which will be  $3,975 \text{ m}^2$ .

The returned water (Barren solution) process is of the order of 81.66% and 18.34% is the addition of fresh water in the area of Pinoc.

#### Conclusion

There is water balance between the entry and exit of the water element in the components of the Yanaquihua Minera SAC operating system for the following reasons:

- Process water recirculation "Barren solution"
- The recirculation process is optimized making use of Pinoc area fresh water and reducing its demand. Groundwater in the area is not being used or an inventory of it made.
- There are no leaks in the pipe system, so there is no contact with the soil and vegetation cover.
- There is a natural product of evaporation temperature weather, being located in a semiarid
- Precipitation ranges except for the years 2011 and 2012 (as reported by SENAMHI) have been deficient which does not contribute greatly to the operational system.

The SENAMHI (National Meteorology and Hydrology Service of Peru) is a Peruvian government agency that keeps records of temperature, wind and precipitation, which hereinafter will be used to clarify the fundamental protocols 4.3.2 (a) and 4.3.4 indicated on to "water balance"

MINERA YANAQUIHUA, S.A.C.

e of Mine Le

March 16-18, 2014 & July 24-25, 201



From the information available from the Yanaquihua meteorological station, according to June 4, 2014 REPORT No. 117-SENAMHI-DR6-2014, the parameter of Monthly Total Precipitation (mm or L/m<sup>2</sup>) of December to March 2011 and 2012 both are considered wet years, compared to 2013 and 2014 which are considered dry years during the same months.

On the other hand, developed by AMSA Consultants in 2001, the **Hydrogeological and** Hydrological Assessment Study to determine the possibilities of obtaining water to be used in the Minas Alpacay Project showed the 1966 to 1971 Yanaquihua meteorological station rainfall records. According to those records it may be concluded that compared to rainfall for the years 2011-2012, rainfall was deficient between 1966 and 1971, with a 40year interval between both records.

In 2007 the Ministry of Agriculture of the Government of Peru through the National Institute of Natural Resources -INRENA developed the hydrological study "WATER RESOURCES ASSESSMENT OF OCOÑA RIVER WATERSHED", which is where Minera Yanaquihua is located. This study presents Planning and integrated water Management techniques.

The methodology used was the analysis of the hydrological regime, precipitation, temperature, evapotranspiration, and flow-runoff; then determine the water balance of the total watershed and sub-watershed monthly.

It is important to mention that the Yanaquihua meteorological station and the Yanaquihua Gold Mine are located in the Ocoña River watershed.

The Yanaquihua meteorological station has rain data since 1966.

The 2007 hydrological study "Water Resources Assessment of the Ocoña River Watershed" mentioned that Yanaquihua area (Ocoña River sub-watershed) climate classification is temperate semiarid. It is located between 2000 and 3000 meter above sea level and characterized by the lack of rain in the fall, winter and spring, with relative humidity described as wet.

According to Yanaquihua Meteorological Station rainfall data from 1966 to 2005, a 38 year interval calculation was made with the observed average precipitation Pp (mm) 160 and average precipitation calculated Pp (mm) 155.0, being the sorting area No.2 homogeneous, and taking into account the correlation of altitude and geomorphology. This information is

March 16-18, 2014 & July 24-25, 2015
Date



further detailed on the Total annual and monthly Average rainfall; total of years (dating back 38 years), noticing that between the months of December to March 1966 to 2005 rainfall was deficient, compared to data from 2011 and 2012.

It is also important to mention another important factor which is the decadal variability (a period of 10 years) of rainfall in southern Peru, this varies depending on the presence of the "El Niño phenomenon" (source: The National Service of Meteorology and Hydrology of Peru -SENAMHI).

No springs or creeks with permanent water were identified around the sludge or downstream of the reservoir area. Therefore it is expected that the water table is very depressed, probably tens of meters deep, this is verified by the presence of old mine works (dry shafts), located in the area downstream of the sludge.

According to the recorded daily rainfall statistics, during wetter years from 1966 to 2014, it can be concluded that by history the area can have a maximum rainfall of 32.1 mm in 24 hours over a period 50-year return. Taking as reference the specific rainfall occurred on February 9, 2012.

The environmental impact assessment has predicted storm data from the past 200 years which provides sufficient probability margins to ensure an overflow.

MYSAC has designed a monthly water balance for an average year.

Yanaquihua is considered an area of dry climate with an annual average of 147 mm. 1984 ranks as the wettest in the last 43 years.

According to the National Hydropower Potential Study in Peru, Yanaquihua is located at an area of annual evaporation rages between 1500 y 1900 mm.

Within the water balance study in the Environmental Impact Assessment for Tailing Dam N°3, MYSAC considers the precipitation resulting for runoff infiltration.

Potential freezing and thawing conditions are not applicable on this operation. MYSAC recycles and sends the solution to the plant in an average of 2.1 liters per second.

In case of power outage MYSAC immediately activates its backup generator plants.

MINERA YANAQUIHUA, S.A.C.

Lead Auditor

March 16-18, 2014 & July 24-25, 2015



MYSAC makes not surface water solution discharges.

All aspects of the design have been taken into consideration.

The tailings discharge is done using an HDPE 4" pipe in good conditions and no abnormality. The tailing discharge is done with the HDPE pipe around the front side of tailing dam perimeter. Due to the specific gravity of the pulp the thickest residue remains on the edge of the tailing dam and the thinnest part goes to the bottom of it where the water surface is formed which is the system used in upstream Tailing Dam.

The operation has established operating procedures for monitoring and maintenance, so that the proper water balance is maintained and prevents overflow or spillage of cyanide solutions to the environment, through the "PETS".

14-PETS-MATET "Mantenimiento de Almacén de Cianuro de Sodio, Tanques, Equipos, Tuberías, Válvulas. - Sodium Cyanide Warehouse Maintenance, Tanks, Equipment, Pipes, Valves.

18-PETS-PMEDR "Programa de Mantenimiento de Equipos y Disposición de Residuos". – Equipment Maintenance and Waste Disposal Program.

This accumulated solution is recycled into the operation by a solution pump (30 HP Meganor pump) which sits on a wooden raft with plastic drums as floats in good verified conditions. The recycled solution is recirculated through a 2" pipe and sent to the barren solution tank located at the Plant. During the inspection no birds and / or any other animals were found dead around the area.

On July 3, 2014 and January 29, 2016 was an extraordinary inspection conducted throughout the MYSAC plant, specifically to check the status of concrete containment areas in leach tanks, tank preparation of cyanide and walls of the sludge.

The operation being given the parameters of freeboard, channels and the walls of the sludge often enough inspections.

MYSAC environmental impact assessment for Tailing Dam indicates that making the balance between inflows and outflows of water in the tailings, in case an extreme event such as 200 years in 24 hours of heavy rainfalls happens, the flood flow that would be impounded in the reservoir represents a volume of 2,881 cubic meter, seven times less than

March 16-18, 2014 & July 24-25, 2015



the volume that would be available in the last phase of operation with the minimum edge (1 m) to consider the operation (15,000 cubic meter), with no chance of water overflow of water in the dam crest. The operation has conducted inspection and monitoring for tailing freeboard.

#### Calculation of the Dimensions of Channels

The channel will have a rectangular section along their whole length, and will be covered in plain concrete with an average slope of 0.5%.

MYSAC has a nearby weather station, with sufficient proximity and topographical conditions to generate rainfall data representative of site conditions. The data has been included in the Tailing Dam environmental impact assessment and helped estimate rainfall.

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

The operation is		
•	✓ in full compliance with	
	☐ in substantial compliance with	Standard of Practice 4.4
	□ not in compliance with	

Summarize the basis for this Finding/Deficiencies Identified:

MYSAC environmental impact assessment considered wild birds. A bird count was performed within a 100 meter radius for a 5 minute period of time.

The record also included birds whose presence was only detected by their singing. The bird counts were conducted in the surrounding creeks, finding low population density and few species (page 3-23 of the environmental impact assessment).

The results of the visit and inspection of the operations on July 24 and 25, 2015, which included inspection of the tailings, confirm that the tailing netting is working efficiently to restrict bird access to open waters. March 31th, 2016 report is illustrated with photos and descriptions including the status.

Tailing #3 is the only open water facility. There is an emergency pond to collect spillages, which is cleaned promptly.



The solutions travel from the plant to the tailing through piping without using channels.

There are channels around the perimeter of the tailings, but only to collect rainwater to prevent it from entering and overloading the tailings.

MYSAC has a perimeter fence around the tailing dams with warning signs in Spanish and the local language to restrict the access of people, wildlife and livestock to the open waters, restrictions on access of birds and other wildlife; and performs monthly Cyanide WAD monitoring.

The environmental impact assessment for the plant capacity expansion states the finding and identification of eight families and bird species within the area. No evidence of bird mortality was observed during the audit or MYSAC inspections. The tailing dam No. 3 has a fence and net to the restrict access of wildlife.

MYSAC maintains periodic inspection record of the tailing dam surroundings with chronological verification of the presence or absence of dead birds. The frequency of tailings dam inspections focused on wildlife mortality is sufficient enough to determine whether significant wildlife mortality is occurring.

MYSAC does not use the heap leach method during its operations.

Standard of Practice 4.5	Implement measures to protect fish and wildlife from direct and indirect discharges of cyanide process solutions to surface water.
The operation is	
	✓ in full compliance with
	☐ in substantial compliance with Standard of Practice 4.5
	□ not in compliance with
Summarize the basis for t	his Finding/Deficiencies Identified:

MYSAC does not have a direct or indirect discharge to surface water.



<u>Standard of Practice 4.6</u>: Implement measures designed to manage seepage from cyanide facilities to protect the beneficial uses of ground water.

The operation is		
•	<ul> <li>✓ in full compliance with</li> <li>□ in substantial compliance with</li> <li>□ not in compliance with</li> </ul>	Standard of Practice 4.6

Summarize the basis for this Finding/Deficiencies Identified:

MYSAC implemented measures to protect groundwater under the tailing dam, doing it by placing a geomembrane of Polyvinyl chloride (PVC) 0.5 mm thick, smooth on both sides. It extends over the upstream slope of the dam and back, a total of 222,307 square feet of geomembrane to cover the two dams.

A layer of fine materials shall be applied before placing the geomembrane, the materials will depends on the ground circumstances to protect the geomembrane against puncture and sharp particles that could be present in the base of the tank. On the steep slopes where the fine material layer is impossible to apply, a layer of nonwoven geotextile of 270 gr/m²will be placed instead.

MYSAC facilities do not use groundwater. On April 2013 CERTIMIN performed a water and air monitoring upstream of the tailing.

In Peru no Government Agency has established a standardized numerical measure to determine the level of cyanide in the groundwater in order to protect its beneficial uses.

The National Environmental Quality Standards *for Surface Water Only* were approved by Supreme Decree No. 002-2008-MINAM. Within these standards the following categories were established:

Plants Watering and Animal Drinking Marine and Coastal Activities Population and Recreation

There is a *National Environmental Quality Standards for <u>Groundwater Proposal published</u> in 2012 but has not yet been formalized.* 

MINERA YANAQUIHUA, S.A.C.

Lead Auditor

March 16-18, 2014 & July 24-25, 2015



Groundwater is not extracted for a beneficial use immediately down gradient of the operation.

Down gradient of operations and (tailing), there is a dry shaft "pique" (no groundwater) MYSAC product operations in 2003, about twenty-five meters deep measured in a vertical plane, and 400 meters of the tailing.

Therefore, this rule does not apply to the operation

MYSAC does not use mill tailing as underground backfill.

No leaks from any source have caused cyanide concentrations to exceed any numerical standards established, thus, no remediation activities have been necessary.

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

The operation is

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

Standard of Practice 4.7

Summarize the basis for this Finding/Deficiencies Identified:

The solution tanks used in the procedure have containment ponds. The CYANIDE WAREHOUSE MAINTENANCE, TANKS, EQUIPMENT, PIPELINES, VALVES AND ACCESSORIES Procedure states spill prevention measures through the inspection of pipes, tanks, containment ponds and HCN level sensors.

There is a secondary containment called "poza de contingencia" in case of spill.

The secondary containments for mixing and process tanks are sized to hold a volume greater than of the largest tank and any piping draining back to the tank.

The secondary containment system also includes another containment pond called contingency pond "poza de contingencia" with additional capacity of 14,125.8 cubic feet, integrated to the containment system for tanks and mixing solution.

MINERA YANAQUIHUA, S.A.C.

Lead Auditor

March 16-18, 2014 & July 24-25, 2015



Within MYSAC maintenance program regular pipeline and pump inspections are considered routine procedures in order to prevent and eliminate leaks to the environment. As soon as a leak is detected, it is repaired and registered as closed, in accordance with the corrective action indicated in the report.

All process tanks have secondary containment.

The PETS-06-OL procedure establishes measures to prevent leaks and spills, which determine that all tanks including mixing, leaching and pipes must have a containment pond. Should a spill or leak take place, the solution will go to a contingency pool. The above described procedure details the parameters of the inspection.

The PETS-06-OL procedure was updated to specify in detail the essence of the measures that were not previously stipulated, for example the verification of the existence of cracks, fracturing/fracking, damages, pumps functioning and the integrity of ponds coatings. There are no cyanide pipelines near surface water.

All tanks and pipelines are constructed of materials compatible with cyanide and high pH conditions, through tanks, metallic and PVC pipelines.

Standard of Practice 4.8:	Implement quality control/quality confirm that cyanide facilities are accepted engineering standards and	constructed according to
	<ul> <li>✓ in full compliance with</li> <li>□ in substantial compliance with</li> <li>□ not in compliance with</li> </ul>	Standard of Practice 4.8

Summarize the basis for this Finding/Deficiencies Identified:

Operation cyanide facilities have been assessed by a suitably qualified person, professional mining engineer IVAN ARROYO, to determine if they have been constructed as indicated on the design drawings, and may continue to operate with existing procedures.

The "YANAQUIHUA MINE CLOSURE PLAN" study submitted on March 2009 and prepared by the company SVS INGENIEROS, SAC, presented to the Peruvian government



through the National Environmental Authority establishes criteria controls to be followed in by the components that make up the operation, based on field information recollection, which include types of materials, geomembrane lining specifications.

MYSAC established a QA / QC, following the provisions for the construction of the tailing dam  $N^{\circ}$  3, taking into consideration soil compaction criteria and materials selection.

MYSAC maintains records of the designs made by the company ADGEMINCO including the plant expansion, storage and mixing area. ADGEMINCO is constantly performing quality control and assurance including the adjustments needed to comply with the ICMI Code.

ADGEMINCO qualified personnel reviewed cyanide facility construction and provided documentation that the facility has been built as proposed and approved.

Operation cyanide facilities have been assessed by a suitably qualified person, Iván Arroyo professional mining engineer, to determine if they have been constructed as indicated on the ADGEMINCO design drawings, and may continue to operate with existing procedures.

<u>Standard of Practice 4.9</u>: Implement monitoring programs to evaluate the effects of cyanide use on wildlife, surface and ground water quality.

☐ in substantial compliance with

The operation is

✓ in full compliance with

Standard of Practice 4.9

 $\square$  not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:

MYSAC has developed a written standard procedure for monitoring activities in the environmental impact assessment "*Procedimiento de Monitoreo Ambiental*" Anexo 4.9.1 Environmental monitoring procedure chapter 4.9.1

MYSAC has protocols established by a specialized external company, among which includes a map of the monitoring locations developed by appropriately qualified personnel. Constant reports are submitted to the Regional Environmental Authority in Arequipa.

MINERA YANAQUIHUA, S.A.C

lame of Mine

March 16-18, 2014 & July 24-25, 2015



MineraYanaquihua SAC performs quarterly Environmental Monitoring (March, June, September and December) according to Ministerial Resolution No. 315-96 EM / VMM (July 19, 1996), issued by the Arequipa Regional Environmental Authority-ARMA. This ENVIRONMENTAL MONITORING PROGRAM that must be observed.

The water and air monitoring are performed by specialized companies such as CERTIMIN and KOSKO SAC; both suitable/certified in preservation techniques and chain of custody of samples for analysis.

MYSAC consider sampling condition like weather, livestock/wildlife activity, anthropogenic influences, etc. and procedure documented in writing: Sampling Procedure "Toma de Muestras de Pulpas, Soluciones, Agua y Otros" "Pulp, solutions, water and others sampling".

MYSAC makes no processed water discharge to surface water. The water needed for the plant is balanced with rain water.

MYSAC inspect for and record wildlife mortalities related to contact with and ingestion of cyanide solutions

Through a formal note MYSAC has committed to perform quarterly monitoring of water (including underground), air and noise which will be performed by INDECOPI laboratory. The reports will be submitted to the Environmental Authority of Arequipa.

The operation monitoring frequency is adequate and reasonable, and without significant consequences in the performance of the operation. The Piñoc and Socosani rivers surface water monitoring records yielded results well below regulatory limits.

Occupational noise, environmental noise and air pollution monitoring results are in compliance.

On March 20 and 21, 2016 three piezometric measurements were taken in three groundwater monitoring stations (#PZ-01, PZ-02 and PZ-03) following the Environmental Quality Standards for Water Category 3 – for irrigation and animal consumption with the Supreme Decree No. 015-2015-MINAM. PZ-01 located downstream of the tailings, the groundwater level was identified at 46.98 meters from the surface. The report indicates WAD and Total Cyanide values below standard. Downstream of the tailings there is a valley with an old "shaft" which remains dry all year.

March 16-18, 2014 & July 24-25, 2015



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

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

The operation is

✓	in full compliance with	
	in substantial compliance with	Standard of Practice 5.1
	not in compliance with	

Summarize the basis for this Finding/Deficiencies Identified:

On page 8-6 of the environmental impact assessment establishes a written procedure that must be developed regarding the termination of operation of the processing plant. It indicates that a general cleaning will done.

#### MYSAC includes:

Finally, at the Post Closure stage maintenance and monitoring of the following will be performed:

- Physical stability.
- Chemical Stability.
- Biological Monitoring.
- Monitoring slope stability.

The decommissioning activities will begin by the end of all charity work. The closure plan will be progressive and simultaneously to the operation.

Additionally, in the Semi-detailed Environmental Impact Assessment Project: "MYSAC Expanding Operations to 150 TMD", paragraph 1.1 states the close of business after 12 years of operations.

The following documents were presented to the Environmental Authority of Arequipa regarding the decommissioning process of MYSAC cyanidation metallurgic plant:

- 1. The mine closure plan submitted in 2009
- 2. Environmental Impact Assessment Project of the plant expanding Operations to 150 TMD, submitted in March 2013



On March 12, 2014, the regional government of Arequipa made some technical comments regarding the Environmental Impact Assessment submitted by MYSAC in 2013, through the official document No. 234-2014-GRA/ARMA/SG.

The operation has developed a report and answered the 52 technical comments made by the government of Arequipa in "the EIAsd- TECHNICAL COMMENTS REPORT. The Semi-detailed Environmental Impact Assessment Project: "Minera Yanaquihua, S.A.C. Expanding Operations to 150 TMD ", submitted to the Authority on May 16, 2014.

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

The operation is			
1	✓	in full compliance with	
		in substantial compliance with	Standard of Practice 5.2
		not in compliance with	

Summarize the basis for this Finding/Deficiencies Identified:

The operation has detailed financial securities to implement the decommissioning plan, as it is required by the "Supreme Decree No. 33-2005-EM that approves the regulations for the control of mine closure in Peru".

MYSAC established cost estimates for decommissioning in the Yanaquihua Mining Closure Plan prepared by the company SVS INGENIEROS, SAC, in March 2009.

Subsequent to the 2009 initial Closing Plan, in 2011 Minera Yanaquihua SAC submitted to the Regional Environmental Authority-ARMA its Closing Plan for TMD 20 (Metric tons per day) mining and metallurgical operations of Alpacay P.U. (production unit). The plan was prepared by **S.V.S ingenieros S.A.C**, estimating the sum of USD 257,501.17, which includes mining and beneficial activities; this plan was developed by a third party hired by **S.V.S ingenieros S.A.C**.

On July 20, 2012 Minera Yanaquihua SAC through **Desarrollo Ecología Liderazgo SRL Consulting Company** submitted a Semi-detailed Environmental Impact Study to expand the Metallurgical Operations of Alpacay P.U. (production unit) to 150 TMD (Metric tons per day). The study included the Plant Closing Plan with an estimated sum of USD 858,482.90.



Minera Yanaquihua SAC presented to the Regional Environmental Authority-ARMA through a February 6, 2013 document No. 211-2013 ARMA/SG an Environmental Management Corrective Report (IGAC) for the Mining Operations Expansion to 150 TMD (metric tons per day). It included the Closing Plan with an estimated sum of USD 398,182.68, which is still current and complete responsibility of Minera Yanaquihua because it is not being applied or implemented by others.

MYSAC calculated the first final closure for March 2009. Last has been updated the estimated cost calculation to 2013.

The closure plan in Section 7.3 sets values for financial security as established by the Peruvian government in the Supreme Decree 33-2005-EM, Title IV, Chapter II, by letter of guarantee.

The Peruvian government in the Supreme Decree 33-2005-EM states the regulations for closure of mines, thus, MYSAC has a mine closure plan.

MYSAC is constantly monitored and supervised by the Peruvian government in accordance with Supreme Decree 33-2005-EM which states sanctions to those who fail to meet the requirements.

MINERA YANAQUIHUA, S.A.C.

Name of Mine

March 16-18, 2014 & July 24-25, 201



#### 6. WORKER SAFETY: Protect workers' health and safety from exposure to cyanide.

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

The operation is		
•	✓ in full compliance with	
	☐ in substantial compliance with	Standard of Practice 6.1
	□ not in compliance with	

Summarize the basis for this Finding/Deficiencies Identified:

The operation has developed procedures describing cyanide-related tasks that should be conducted to minimize worker exposure such as Working in Confined Space in the Coal Recovery Area and Maintenance of Leach Tanks "TRABAJO EN ESPACIO CONFINADO ÁREA DE COSECHA Y TANQUES DE LIXIVIACIÓN 19'X19' Y12'X15', PASO DE 7.1 A 7.4".

The EQUIPMENT MAINTENANCE PROGRAM AND WASTE DISPOSAL, "EI PROGRAMA DE MANTENIMIENTO DE EQUIPOS Y DISPOSICIÓN DE RESIDUOS PASO 4", establishes ventilation and decontamination parameters before starting repair works or mills maintenance or leach tanks. Likewise, it shows the safe sequence during power ups and describes the required personal protective equipment.

All the procedures require, where necessary, the use of personal protective equipment and address pre-work inspections as standard procedure format.

Every year for MYSAC, supplier or customer solicitation, the operation implement in all procedures to review proposed process and operational changes and modifications for their

MYSAC implements a written procedure to keep record or control changes in order to review process proposals, operational changes and modifications that could impact on the safety or health of employees.

The procedure is to define in coordination with the Department of Occupational Health and Safety any situations or changes at the processing plant. The procedure details the parameters that might undergo changes (e.g. mechanic, electric and chemical elements) through hazard identification, risk assessment and control.



The operation requests its own workers, customers, and suppliers input, in order to improve procedures – Workplace Safety and Health Act, its Regulation approved by Supreme Decree N° 005-2012-TR, and Mining Occupational Safety and Health Regulation (RSSOM, for its Spanish acronym) approved by Supreme Decree 055-2010-EM.

Additionally, on December 31st, 2013, the MYSAC's Safety Committee was formally created, according to Law N° 29783.

MYSAC's Safety Committee has a Chairman voted by its employees, and with the commitment of working together towards the preparation and review of the Annual Safety Plan.

Interview was conducted to Olden Montalvo, a member of the first aid brigade with four years working in Alpacay plant and Wilber Flores, a fire department official member, and part of the emergency response of the mine, which exposed that there is a good communication through safety meetings and committee mine, to communicate cyanide issues.

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

The operation is

✓ in full compliance with

□ in substantial compliance with Standard of Practice 6.2

□ not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:

MYSAC has determined the appropriate pH for limiting the evolution of hydrogen cyanide gas during mixing and production activities. From December 12, 2013 until March 17, 2014, the registries were reviewed. The pH levels were around 11 and 12.

MYSAC uses monitoring devices (ALTAIR PRO SINGLE GAS DETECTOR) to limit worker exposure to hydrogen cyanide gas, where the potential exists for significant cyanide exposure.



MYSAC has the "Monitoring of Hydrocyanic Acid Gas (HCN)" form, where the pH and HCN values measured are registered in the Cyanide Storage, in the preparation tank, in the agitator tanks, and in the coal harvest area.

MYSAC has identified areas such as the agitation tanks and coal harvesting, where workers may be exposed to cyanide in excess of 10 parts per million on an instantaneous basis and 4.7 parts per million continuously over an 8-hour period, and require the use of personal protective equipment. In agitation tanks there have been cases where HCN values have overtaken in up to 7 ppm and in the harvest area where the value has reached 23 ppm.

MYSAC uses monitoring devices (MSA-ALTAIR PRO SINGLE GAS DETECTOR) to limit worker exposure to hydrogen cyanide gas, where the potential exists for significant cyanide exposure.

There are three instruments with serial numbers as follows:

- 05301629
- 10500087
- 12500033

22 cyanide concentration and pH monitoring records related to the activities were reviewed.

Evidence of training when using the instruments was reviewed.

The collection hood and ventilation duct for the carbon collection area has been completed as planned.

In the month of November 2013, two measurement instruments CN ALTAIR PRO HCN, brand MSA were purchased, pursuant to receipt N° 009-0016437 (from "MSA Peru, SAC"); calibration is valid, according to certificates N° 4968 and 4969.

It was observed that warning signs have been placed where cyanide is used, in places such as the entrance to the Alpacay Plant, storehouse, mixing tank, agitation tanks. There is a bulletin board accessible to all employees of the plant with information about the risks associated with cyanide with illustrations on care and safety signs.

Showers, low-pressure, eye wash stations and dry powder fire extinguishers was observed in stock and area of the plant.

MINERA YANAQUIHUA, S.A.C.

ne of Mine

March 16-18, 2014 & July 24-25, 201



MYSAC performed daily test showers, low-pressure eye wash station on a regular basis; it also has a fire extinguisher monthly inspection program and keeps record. Fire extinguishers are located in the cyanide storage unit, leaching/mix area, administration offices and at the mine.

Mixing, process tanks and piping containing cyanide are identified to alert workers of their contents, and is the direction of cyanide flow in pipes.

Material Safety Data Sheets (MSDS), first aid procedures, or other informational materials on cyanide safety is available in the language of the workforce.

MYSAC established for its workers a "handout" and a bulletin board with general and emergency information on sodium cyanide.

MYCS has 52-PETS-PIEIPC procedures and format in place and being implemented 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.

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

The operation is

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

Standard of Practice 6.3

Summarize the basis for this Finding/Deficiencies Identified:

MYSAC has water, oxygen, a resuscitator, antidote kits, and a radio for emergency notification readily available, means that are established as requirements in the Emergency Response Plan PEM-MACS, Section 2.0.

MYSAC inspects its first aid equipment every week to ensure that it is available when needed, pursuant to procedure 13-PEM-PA.

MINERA YANAQUIHUA, S.A.C.

of Mine Lead Aug

March 16-18, 2014 & July 24-25, 2013



Following the indication of the MSDS with the aspects of storage, the MYSAC metallurgic Process Plant stores its amyl nitrite mainly in its original packaging (i.e. a box) inside a case that also contains all the components of the ANTIDOTE KIT. This case is located in a cool, ventilated area and stored between 20 ° C and 25 ° C, as recommended by the manufacturer's instructions for CYANIDE ANTIDOTE PACKAGE (For the Treatment of Cyanide Poisoning). It is not exposed to strong oxidants, extreme temperatures or processes that can cause a fire.

In order to replace the existing antidote (amyl nitrite), MYSAC purchased Hydroxocobalamin antidote kit, since Amyl Nitrite is not available in Peru.

MYSAC has developed specific written emergency response plans and procedures to respond to cyanide exposures, such as first aid cases, injured transportation to health centers, exposure control and environmental protection.

During Mr. Holden Montalvo Neyra's free days or whenever he is not available at MYSAC Mr. Wilber David Rosas substitutes for him. Mr. Rosas is a firefighter of the Fire Department in Camana, Peru; he is a certified first aid technician (for cyanide), MATPEL and can provide first aid whenever there is an emergency situation of that kind.

Other employees that have been trained by the Red Cross in Arequipa to assist people exposed to cyanide are: Edwin Rosales and Samuel Ramirez.

MYSAC developed procedures to transport workers exposed to cyanide to locally available health center.

On June 13<sup>th</sup>, 2014, will be held training for authorities, including communities representatives around the mine, health center workers, supervisors and specialists cyanide by MYSAC.

During the training held at the mine it was explained to the participants the risks of cyanide exposure, treatment when facing exposure and communication channels were established for emergency situations.

The medical facilities nearby MYSAC are small (one doctor on site and one substitute), there are only two police officers the town of Yanaquihua and no fire stations. The closest fire station is six (6) hours away from the mine.

MINERA YANAQUIHUA, S.A.C

Name of Mine

March 16-18, 2014 & July 24-25, 201



This situation has led Minera Yanaquihua to creating the emergency brigades and providing extensive training to the employees in the mine.

During the training held at the mine it was explained to the participants the risks of cyanide exposure, treatment when facing exposure and communication channels were established for emergency situations.

As part of the agreement on July 26<sup>th</sup>, 2014 a drill was conducted for authorities and health center of external response. EDEWIT representatives giving guidelines before starting the drill to local authorities, health center staff, police and ambulance staff.

David Zarate (an EDEWIT employee) a certified nurse and specialist in handling hazardous substances and materials has given seminar and coordinated drill for health centers and authorities. He has certified that the health center has qualified staff, equipment and appropriate experience to provide the necessary treatment of persons exposed.

MYSAC established announced and unannounced Drill Procedures which have the purpose of been able to count on a documented procedure to identify the level of preparedness to respond to any contingency. Also, to evaluate, improve the performance of the drills, and update the emergency response plan for emergency control for the discharge, storage, and handling of substances used in the Process Plant.

On October 18, 2013, a Cyanide Spill Drill was conducted in MYSAC's Metallurgy Plant in which a worker who was moving a cyanide cylinder fell releasing substances in the surroundings.

Observations and analysis are indicated in the drill report in order to obtain lessons learned, among others, the lack of enough antidote (this could include oxygen and its respective masks in enough quantity). Each supervisor contributed with comments with the feedback from workers.

MINERA YANAQUIHUA, S.A.C

Name of Mine

March 16-18, 2014 & July 24-25



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

<u>Standard of Practice 7.1</u>: Prepare detailed emergency response plans for potential cyanide releases.

The operation is		
1	in full compliance with in substantial compliance with not in compliance with	Standard of Practice 7.1

Summarize the basis for this Finding/Deficiencies Identified:

MYSAC developed an Emergency Response Plan to address potential accidental exposures and releases of cyanide "PLAN DE EMERGENCIAS DE USO, MANIPULACIÓN, ALMACENAMIENTO, MANEJO DE CIANURO DE SODIO Y DISPOSICIÓN DE RESIDUOS PELIGROSOS" - PEM-MACS, which has been updated and developed in compliance with Law N° 29023 of D.S. N° 045-2013-EM, mandatory Law on the development and presentation of "Contingency Plans" and in other standards issued by the competent sectorial authority related to the use of sodium cyanide.

This Emergency Plan consists of the organization, responsibilities, and response to incidents and accidents, training programs, drills, procedures for evaluation, update, and review of the present Plan for health protection of workers and environment conservation. Rescue Crews are made up of persons conveniently trained, with the competence to face an emergency. This constitutes the best prevention tool, effective and timely response in this type of emergencies.

In its Plan, Section 5.2, MYSAC considers cyanide moving and handling, whose magnitudes and consequences may be from minor to catastrophic; which may involve personal factors, the environment, neighboring communities, and operations of the Process Plant.

**CITSSA**, certified Company by the Code, and which performs the transportation for MYSAC, relies on a Route Sheet, in which are indicated the scenarios in which incidents may occur with the cyanide load. Population density, types of roads, bodies of water, and available health centers and included.



The MYSAC Emergency Response Plan considers releases during unloading of the truck, storage, and transportation to the mixing tank.

MYSAC has established a procedure to minimize the risk of spills during fire, through the "Response Procedure During and After a Fire, Section 5.4.6., of the Emergency Response Plan."

Once a fire that involves sodium cyanide is detected, the first response will be to alert the personnel that are working in the area and then try to extinguish it to avoid the fire from spreading and causing more serious damages. In the cases of fire of great magnitude, the Emergency Central Committee in conjunction with the Firefighting Brigade will organize and coordinate all response actions with the purpose of containing the fire and assuring the safety of the whole personnel.

Additionally, it has established the procedure 11-PEM-CI

MYSAC established the procedure 12-PEM-DCS for cases of tank, piping, and valve ruptures, where it indicates the protection equipment for employees, tools, and equipment, as well as the steps to follow.

In Section 5.5 (General Evacuation) of the Emergency Response Plan, MYSAC establishes measures to be taken in case of overflowing of tanks, tailing dams, and dikes.

It has the objective of establishing and carrying out measures to avoid or diminish the destructive impact of a spill emergency based in an analysis of the internal and external risks existent in operations of the Process Plant and tailings dam.

In case of power or pumps failure, MYSAC has backup power generators.

Additionally, they have procedures to inspect the pumps which consider replacing the same in case of failures.

For emergencies cases of leaks, spills, broken valves, piping, tanks, power failure, tailing dam sliding and other uncontrolled; the response procedures are in the Emergency Response Plan Management and Cyanide Handling:

a. Remain calm, do not shout or run.

IINERA YANAQUIHUA, S.A.C.

ne of Mine Lead Auditor D



- b. Notify the supervisor and / or head area, either verbally or using radio communications.
- c. Activate the emergency alarm for general communication in all MYSAC areas.
- d. The area manager informs all MYSAC departments to activate the Central Emergency Committee.
- e. The Emergency Brigade will have a blue vest and the field coordinator orange.
- f. The Emergency Brigade for attend the tailings spill and the Emergency Central Committee "Comité Central de Emergencias" (CCE), come to the place, led by the field chief, Deputy Chairman and President of Central Emergency Committee.
- g. The Chairman of the Central Emergency Committee decides the actions to take.
- h. It begins to mobilize the equipment and machinery to the area downstream of the tailings dam, then the containment work, diversion and other is done to mitigate the emergency.
- i. The community relations personnel, informed all surrounding communities potentially affected for the emergency. If is the case, will be implemented an evacuation program, after coordination with local and district authorities.
- j. Once temporarily stabilized the event, MYSAC will proceed to pick the solid material into the same tailings dam using heavy machinery.
- k. The Chairman of the Central Emergency Committee, informs to all support institutions (Civil Defense, Police, Fire Department, etc..), local district authorities (mayors, Directors of Education Centers, Health Posts, Governors, Judges peace, etc.), provincial (Mayors, Directors of Education Centers, Health Posts and Hospitals Governors, Justices of the Peace, etc.) and regional (Mayor, Hospitals & Clinics, Regional Directorate of Energy and Mines -.. DREM Arequipa etc.).
- 1. The Environment Department proceeds with the remediation and revegetation of all areas affected by the emergency.
- m. Permanent environmental monitoring will be conducted in the area, for water quality, soil and air until the parameters are within the limits established Maximum Allowable.
- n. At the end of the event, the Security Department prepares the Respective Report to the Operations Department, for their respective purposes, as applicable.

The Emergency Response Plan, setion 5.2.2, provides preventive measures to avoid filtration Tailings Dam.

The concepts used to avoid instability and leakages in the Tailings Dam, will be conditioned by the project specifications that was prepared by SVS INGENIEROS SAC, approved in its construction.

MINERA YANAQUIHUA, S.A.C.

Lead Auditor

March 16-18, 2014 & July 24-25, 2013



Cyanide treatment systems are addressed in the emergency plan through monitoring every hour of the concentrations present in the solutions, and with backup power sources, the same way as with backup pumps in recovery systems.

MYSAC has earth moving machinery available to perform earth moving works in dike or tailing, the same as submersible pumps with backup power energy.

MYSAC implements preventive monitoring, such as:

- Monitor the water mirror and level of recovered water in the dam in a constant relation with consumption of recirculated water in the Process Plant.
- Inspect according to Control Chart and Inspection Program of the Geotechnical Stability and conditions of the Tailings Dam.
- Avoid seepage of water and/or slurry towards the subsoil, to avoid environmental contamination.

When detecting cracks no matter how small they are, it should be communicated to the Emergency Central Committee for the respective evaluation.

MYSAC uses CITSSA, company certified by the Code for the transport of cyanide. In Section 8.0 of the Emergency Response Plan it indicates that inspections and audits are performed to the transportation process.

MYSAC has established the procedure 12-PEM-DCS for "Spill of Solid, Solution, and Pulp Sodium Cyanide," and in Section 5.2 of the Emergency Response Plan, it addresses the response actions to be taken in case of leaks inside and outside the facilities of the Process Plant that could be considered a worse scenario. In such case State support institutions would be involved in conjunction with the MYSAC's Crisis Committee.

MINERA YANAQUIHUA, S.A.C

Name of Mine

March 16-18, 2014 & July 24-25, 201



<u>Standard of Practice 7.2</u>: Involve site personnel and stakeholders in the planning process.

The operation is		
The operation is	✓ in full compliance wi ☐ in substantial complia ☐ not in compliance with	ance with Standard of Practice 7.2

Summarize the basis for this Finding/Deficiencies Identified:

Minera Yanaquihua S.A.C., is supported by two types of emergency organizations to face situations and events that place in risk its personnel, safety, health, environment, and others adjacent to the operations.

The members of the first consideration are the workers in general of the Process Plant, who will attend in first instance any emergency of minor magnitude, either fire, spills, evacuation, or first aid.

Brigades have been organized for the attention of fire, spills, and the attention of first aid and evacuation, within the Company.

In Section 4.2 of the Emergency Response Plan, it has been established the Emergency Central Committee that is in charge of coordinating human, logistics, and technological resources to call up in any type of emergencies.

The Emergency Crew and the Emergency Central Committee (CCE, for its Spanish acronym) will be in charge of coordinating with different brigades the actions that will be taken place before, during, and after the event. In order to comply with that, the Committee will be provided with all communication systems and facilities for the control of the emergency. The Committee includes a Chairman, field coordinator, and leaderships in the different brigades.

MYSAC has informed communities that they could be potentially affected about the nature of the risks in case of cyanide spills.

It has been developed a Community Relations Plan which has the objective of establishing a social communication system addressed to the population under the framework of intervention of the Yanaquihua District. The community will be informed on the activities



to be developed, with the participation of local authorities, in order to increase trust in the community and authorities towards Minera Yanaquihua S.A.C.

The Community Relations Plan which is under the responsibility of a full time engineer, considers as areas of indirect influence the rural communities of Charco and Ispacas, as well as the Yanaquihua District, all these related to the issue of the importance of water since they all take water from the affluent of the Piñoc River and because of the road that is used permanently during the whole year for the movement of personnel and entry of materials or supplies for the project.

Among the functions of the community relations are:

- Coordinate with the Environment, Health, and Safety area the process to communicate industrial safety measures of the Company.
- Assure that all workers under the responsibility of the safety area follow safety, environment, health, and personal protection procedures.

The community meeting scheduled for June 13, 2014 was conducted as planned. Risks of accidental cyanide discharge and emergency procedures were discussed during this meeting. Civil and health authorities of the neighboring communities were present at the meeting. Attendance list records and meeting pictures were verified.

From June 25 to 30, 2015 a collective technical monitoring was performed. Authorities and community members visit the facilities during compliance monitoring, which are made by an environmental designated company for dust control, mainly the communication channels, occupational atmosphere and water.

The "Cyanide transportation and handling emergency plan" training was held on January 19, 2016. The training was provided to different local communities' authorities in Yanaquihua, Ispacas, Charco and to medical staff of Ispacas and Yanaquihua health centers. The training was presented by Mr. David Zarate Soto, EDEWIT transportation supervisor, which is an ICMI certified company.

MYSAC created a Central Committee to respond to any emergencies, which includes Company personnel and among them there is a firefighter acting as an Emergency Medical Technician (EMT) / First Aid Brigade Chief. All members have participated jointly with the labor force in the planning of emergency actions; however MYSAC has not involved outside responders to the emergency planning and response process (e.g. the police and fire departments, or medical facilities).

MINERA YANAQUIHUA, S.A.C.

Lead Auditor

March 16-18, 2014 & July 24-25, 2015



Nearby MYSAC facilities there is a medical center with a permanent doctor and a substitute one; two police officers at the police station but no fire stations nearby. The closest fire station is six (6) hours away; this is why MYSAC decided to provide first-hand training, equip themselves with all available resources as well as an ambulance, and also provide input to the specific procedure to be used. MYSAC emergency brigade is familiar with the site and the Emergency Response Plan.

Page 8 of the Emergency Plan details the flow of communication until the four brigades provide emergency response depending on the type of emergency.

Response levels are set out in Section 3.2. Depending on the severity of the emergency, three alert levels have been established: Level 1, Level 2 and Level 3. Alert level ONE is the lowest or mildest making alert level THREE the highest or most severe.

#### Level Alert 1

It is when the emergency or consequences can be controlled by the employees of the affected area.

#### Level Alert 2

It is when the emergency or consequences (causing no public or the environment damage) must be controlled by the emergency brigades under the jurisdiction of the unit Chief of Safety.

#### Level Alert 3

It is a major or large-scale event with emergencies or consequences exceeding the capacity of response and mitigation of the emergency brigades under the jurisdiction of the Chief of Safety, causing also damage to the environment, and public and private property.

Minera Yanaquihua has two types of organizations to deal with emergency situations and events that may endanger personnel, its safety, health, the environment and other related to the operations environment.

The organization detailed on this Plan will be in charge of coordinating the mobilization of any human, logistic and technological resources during any type of emergency. The Emergency Brigade and the Central Emergency Committee (CEC) will be in charge of coordinating with other brigades the procedure to follow before, during and after the event. All communication systems and other facilities for emergency control will be provided to this Committee in order to complete this task.

MINERA YANAQUIHUA, S.A.C.

Lead Audito

March 16-18, 2014 & July 24-25, 2015



Minera Yanaquihua has about 90 surface workers, 32 of them are part of the volunteer emergency crews at the Metallurgical Plant, Offices and Camps. These groups have physical and psychological conditions that make them capable of responding to an emergency of any kind. They are constantly reinforced through training drills, developed training and within the unit with own staff and external.

Minera Yanaquihua has agreed with doctors in the Yanaquihua health center and committed with Government Agencies such as the Camana Firefighters, under David Wilber Rosas coordination, who volunteers for The Camana Fire Station No. 35, whom have been conducting training to MYSAC brigades, for emergency cases.

In Section 12 of the Emergency Response Plan parameters have been established to keep it up to date. The Plan is updated every year according to the lessons learned from incidents, drills, or reports from the staff, communities, customers, or providers.

MYSAC is aware that support institutions are distant from the mine and the help and support they could provide would be insufficient, thus, it is preparing and training brigades. This is why constant training is provided by local physicians and firefighters to prepare its brigades for emergency cases, first aid, ambulance implements handling, injured transport, extinguishers handling and firefighting.

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

The operation is

✓ in full compliance with□ in substantial compliance withStandard or

Standard of Practice 7.3

 $\square$  not in compliance with

Summarize the basis for this Finding/Deficiencies Identified:

MYSAC's Emergency Response Plan has established a response coordinator called Chairman of the Crisis Committee who has the authority to provide the necessary resources in the person of the Operations Manager.

MINERA YANAQUIHUA, S.A.C.

Name of Mine

March 16-18, 2014 & July 24-25, 2015



The Emergency Response Plan, Section 4.1, identifies the emergency response team: Spills, First Aid-Evacuation, Transportation of Patients to Health Centers, Fires, and Emergency Evacuations.

MYSAC establishes and provides adequate training to its personnel that respond to emergencies, pursuant to requirement from the "Supreme Decree 055-2010-MEM (Occupational Safety and Health Regulation of the Ministry of Energy and Mines).

Likewise, Section 5.2.2 of the Plan, indicates that after the occurrence of an emergency, the staff in general will be trained and given feedback in order to analyze deficiencies, which will be the benchmarks for increased training and corrective measures.

The staff camp is located no more than 200 meters from the Process Plant, recovering and recirculation systems; as well as of tailings dam. Call-out procedures are ready to respond to emergencies on a 24-hour basis.

In Section 4.3 of the Emergency Response Plan are indicated the responsibilities and functions of the coordinators and members of the emergency team.

MYSAC, in Attachment 2 of the Emergency Response Plan has established and keeps in place personal protection equipment, for first aid response, intoxications, cleaning, and cyanide neutralization. Dozer D6, Caterpillar Front Loader, Excavator, scoop wagner, and two trucks.

MYSAC's Emergency Response Plan, Procedure 13-PEM-PA, includes procedures for the inspection of the personal protection equipment and of the response to emergencies.

MYSAC's Emergency Response Plan, Section 4.0 describes the roles of the Crisis Committee and Organized Brigades when handling emergency situations. Just as it is stipulated in 7.2.3 response protocol, the Crisis Committee and the Brigades have formed a committee of emergency response with sufficient autonomy to handle local emergencies (i.e. small scale damages to the public or the environment) and coordinate accordingly with national or international organizations in case aid is needed.

13-PEM-PA First aid and Evacuation Procedure, as well as 13-PEM-TPSH "Transfer the patient to a Health Center and Hospitals" that are part of the EMERGENCY PLAN OF USE, HANDLING, STORAGE, HANDLING OF SODIUM CYANIDE AND DISPOSAL OF HAZARDOUS WASTE include the participation of the institution in response to

MINERA YANAQUIHUA, S.A.C.

Name of Mine

March 16-18, 2014 & July



emergencies, but clarifies that the initial emergency response will be given by the emergency brigade and then transfer the patient to the health center.

MYSAC has sent letters to external institutions, such as health centers, police, civil authorities, and community representatives. Attached to the letter is the Emergency Response Plan. Those same institutions, authorities, and representatives have been invited for trainings on the use and handling of cyanide, and emergency prevention systems that have been developed.

<u>Standard of Practice 7.4</u>: Develop procedures for internal and external emergency notification and reporting.

The operation is		
	<ul> <li>✓ in full compliance with</li> <li>□ in substantial compliance with</li> <li>□ not in compliance with</li> </ul>	Standard of Practice 7.4

Summarize the basis for this Finding/Deficiencies Identified:

MYSAC, in its Emergency Response Plan, Revised 2015, keeps the telephone numbers for internal and external notifications. These include telephone numbers of the health centers and hospitals, police and firefighting stations, and community authorities.

MYSAC Emergency Response Plan, Section 6.0 includes procedure and contact information for notifying affected communities, authorities and for media communication.



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

The operation is		
op	<ul> <li>✓ in full compliance with</li> <li>□ in substantial compliance with</li> <li>□ not in compliance with</li> </ul>	Standard of Practice 7.5

Summarize the basis for this Finding/Deficiencies Identified:

The procedures 12-PEM-DCS and 13-PETS-CEPA, included in the Emergency Response Plan, SOLID, SODIUM CYANIDE SPILL, SOLUTION AND PULP", and EXPOSURE CONTROL AND ENVIRONMENTAL PROTECTION describe procedures of recovering and neutralization of solutions and solids, through the use of lime. Cyanide MSDS is available in the Spanish Language for all employees.

Section 5.2 of the Emergency Response Plan, through the application of lime, recovering of the soil or other contaminated means. Afterwards, the "Recovered Residues" are incorporated to the process.

Filtration residues are incorporated to the process, and this is indicated in the Emergency Response Plan, Section 5.2.4 "DECISION TREE IN CASE OF SODIUM CYANIDE SPILLS."

MYSAC uses bottled water for human consumption.

MYSAC Emergency Response Plan, section 5.2.1, step 13., prohibits the use of chemicals such as sodium hypochlorite, ferrous sulfate and hydrogen peroxide to treat cyanide that has been released into surface water.

In case of spills, MYSAC obey the decision tree, established in the emergency response plan, for both emergency cases dry and wet locations, the plan indicates warnings to communities, monitoring gas / water and sample collection.

MYSAC clarified observations requested by Arequipa Environmental Authority, with regard to measures in case of spills:



For spill cases in volumes greater than 5m³, MYSAC will proceed to the evaluate the affected soil, according with the protocols established in the Soil Sampling and Preparation of Soil Decontamination Plans "Muestreo de Suelos y Elaboración de Planes de Descontaminación de Suelos" approved on R.M. N ° 085-2014-MINAM and parameters established in ECAs-approved in the Peruvian Supreme Decree DS N ° 002-2013-MINAM.

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

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

Summarize the basis for this Finding/Deficiencies Identified:

MYSAC established period evaluations of the Emergency Response Plan and capabilities, and reviews every year. The last revision was on June, 2015.

MYSAC's Emergency Response Plan, Section 7.0 and Section 6.6 establish the conduction of drills. This is described in the Procedure 13-PETS-PS. MYSAC keeps a record of the drills carried out on March 19<sup>th</sup>, May 16<sup>th</sup>, and September 27<sup>th</sup>, 2015.

Section 7.2 indicates drills schedule for the year 2015.

The workers of the Process Plant are the persons who integrate and join the Emergency Crew and are the main actors of the programmed drills.

Theory and practice training to the staff is performed regarding emergencies that involve sodium cyanide. These are registered in the respective formats.

Both, the provider and the cyanide transporter, are required to issue an emergency drill against cyanide spill for cyanide transport and storage.

MYSAC has not had any cyanide related emergency. On June 4<sup>th</sup>, 2014, has revised the emergency response plan, giving more emphasis to different spill scenarios and exposure to cyanide.



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

<u>Standard of Practice 8.1</u> : Trai use.	n workers to understand the hazar	rds associated with cyanide
use.		
	in full compliance with in substantial compliance with not in compliance with	Standard of Practice 8.1
Summarize the basis for this F	inding/Deficiencies Identified:	
Energy and Mines of Peru. T	g matrix which is required by Dechis matrix considers 37 issues, be that entails a minimum of 9 hourmed with a grading system.	eing issue N° 30 "Use and
and handling of cyanide, as we	efresher training is conducted period as response in case of emergence 3 hours formal training in cyar 23, 2015.	eies.
	retained in its personnel recordere given after the training to those	•



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

The operation is		
•	<ul> <li>✓ in full compliance with</li> <li>□ in substantial compliance with</li> <li>□ not in compliance with</li> </ul>	Standard of Practice 8.2

Summarize the basis for this Finding/Deficiencies Identified:

MYSAC trains workers regarding storage, cyanide use, handling, and maintenance so that there is a minimum risk to health and environment. Training records, with a 30-minute duration, were reviewed from the month of May 2013 until March 8, 2014 in issues of Cyanide Handling, Health effects, Cyanide Storage, Cyanide Dosing, International Cyanide Management Institute (ICMI) Certification, and 5-minute tool box, as well.

MYSAC has the necessary elements in its Training Program. It trains new employees; it offers 5-minute tool box talks, 30-minute weekly trainings, formal training with competent instructors, and appropriate didactic material.

MYSAC receives training from qualified personnel in intoxication and response to emergencies, such as Carlo Vargas, qualified by Dupont Chile, 3 M who has offered training on respiratory protection; and through the Camana Firefighters, who have entered into an agreement to train mine personnel in specific issues, as organizing First Aid Brigades, Firefighting, and Transportation of Injured persons.

Before working with cyanide each employee receives initial and periodic training; copies of procedures and safety pamphlets on cyanide are given to each employee.

MYSAC offers refresher training on a continuous basis which is documented.

MYSAC conducts evaluation of the efficiency of its trainings through the application of written tests with performance scoring.

MYSAC keeps records documenting training received by its workers. These records include the name of the instructor, date of the training, issues addressed, and copy of the test done by the employee.

MINERA YANAQUIHUA, S.A.C.

Lead Auditor

March 16-18, 2014 & July 24-25, 2015



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

The operation is		
_	✓ in full compliance with	G. 1 1 CB 0.6
	$\square$ in substantial compliance with	Standard of Practice 8.3
	$\Box$ not in compliance with	

Summarize the basis for this Finding/Deficiencies Identified:

MYSAC offers training to personnel performing mixing and to those in charge of production and maintenance about the procedures to follow in case of a spill. Implementation registries and interviews to field personnel were verified.

All personnel of MYSAC are trained in decontamination procedures and first aid attention. Records of the participation of the workers in drills are kept in "Attendance Minutes".

Coordinators of the Emergency Response Plan and members of the brigades have been trained on the procedures indicated in such plan related to cyanide and to the response team. Product providers, firefighters, and contracted companies have offered training and organized the personnel.

MYSAC has made coordination meetings and practical exercises with external agencies to respond an emergency with paramedics, firefighters, health authorities and community-related emergency response.

MYSAC in its training matrix establishes monthly refresher training to respond to cyanide exposures and releases.

MYSAC established drills periodically for training purposes, which cover workers exposure scenarios and spills into the environment.

MYSAC has established the procedure 13-PETS-PORIPS, which has the objective of identifying the deficiencies, failures, and lack of resources and others, in the development of drills; additionally, evaluates the level of preparedness of the emergency crew members and of the Emergency Central Committee of Minera Yanaquihua S.A.C. that will be registered afterwards for subsequent trainings and implementations.



Cyanide training records are retained for new employee induction, five-minute tool box talks, 30-minute weekly safety meetings, and formal trainings, including the names of the employee and trainer, the date of training, the topics covered, pictures, and score evaluation.

#### 9. DIALOGUE: Engage in public consultation and disclosure.

Standard of Practice 9.1:	Pro	vide	stake	hold	ers t	he	oppo	rtunity	to	com	muni	cate	issu	es o	)f
concern.															
The operation is	<b>√</b>	in fu	ıll co	mplia	ance	wit	th								
			ubsta in co		,			with	St	anda	rd of	Prac	etice	9.1	

Summarize the basis for this Finding/Deficiencies Identified:

MYSAC has an open-door policy, for which it has the support of a person exclusively in charge of dealing with community issues, including those related to cyanide handling, who can offer those interested the opportunity to address any concern.

The community meeting scheduled for June 13, 2014 was conducted as planned. Risks of accidental cyanide discharge and emergency procedures were discussed during this meeting. Civil and health authorities of the neighboring communities were present at the meeting. Attendance list records and meeting pictures were verified.

From June 25 to 30, 2015 a collective technical monitoring was performed. Authorities and community members visit the facilities during compliance monitoring, which are made by an environmental designated company for dust control, mainly the communication channels, occupational atmosphere and water.



<u>Standard of Practice 9.2</u>: Initiate dialogue describing cyanide management procedures and responsively address identified concerns.

The operation is		
	✓ in full compliance with	
	☐ in substantial compliance with	Standard of Practice 9.2
	$\square$ not in compliance with	
Summarize the basis for th	is Finding/Deficiencies Identified:	
• 1	aluation of the Environmental Impac bors, communities, and health, civil a	• •
community, in which in	see an spontaneous approach from o good terms a MYSAC employee atteroutine environmental monitoring that	ended an oral consultation,
Standard of Practice 9.3: regarding cyanide availab	Make appropriate operational and le to stakeholders.	environmental information
The operation is		
	✓ in full compliance with	
	☐ in substantial compliance with	Standard of Practice 9.3
	□ not in compliance with	
Summarize the basis for th	is Finding/Deficiencies Identified:	
As part of what the Peruvi	ian Law requires, in the public hearing	g held for the dissemination
of the Environmental In	npact Study was distributed information	ation concerning how the

A large number of the labor force includes persons from neighboring communities, who has access to all the safety information on cyanide. Workers receive handouts on cyanide, its risks because of exposures and to the environment.

operation was going to be developed, in reference to cyanide handling.



MYSAC has provided information to workers who are mostly residents of the communities around the mine and maintains a suggestion box to express any complaint.

MYSAC made public communities hearing around Alpucay plant direct influence, where the expansion of the cyanidation plant 150 MT per day by the regional environmental authority and environmental consultants.

Copy of the executive summary of the Environmental Impact Study, was given.

Population workshops were conducted to inform the expansion project of the plant.

With the help of the Department of Community Development MYSAC has an established communication channels with local authorities, to report and inform situations such as fatalities, spills, incidents that may affect public health, and discharges that need to be reported to the regulatory agencies of Peru.

Training, and Letters sent by the Department of Community Relations representatives of communities and local authorities to telephone directory for emergency support institutions and regional mining regulatory organizations.

The operation have been field gas and water monitoring together with neighboring communities around the mine.

According to Law No. 29023, for PM (small mining) and MA (medium mining), ARMA is the Arequipa environmental competent authority to issue specific rules to ensure the use, handling and proper management of cyanide in the activities of the PM and MA, as well as to impose sanctions or conduct audits.

According to Law No. 29023 and DS EM 045-2013 the Ministry of Energy and Mines (MEM) is the competent authority to authorize the use of cyanide. ARMA exercising its power implements the supervision and control in the PM and MA according to the commitments defined in the EIAs.

The Ministry of Energy and Mines (MEM) acting as regulatory agency of Mining Activities requires mining companies through regulations and laws to communicate clear information of any fatal accident, any safety or hygiene emergency, or environmental emergency.

MINERA YANAQUIHUA, S.A.C

Name of Mine

March 16-18, 2014 & July 24-25, 201



According to law enforcement of mining activities (Approved by the President of Peru arranged by the Congress of the Republic of Peru - 2001) - Law No. 27474, in accordance with the ministerial resolutions provides

In the case of fatal accidents and emergency situations should be reported to the Environmental Mining Authority within the following 24 hours after it happened.

OSINERGMIN (Supervisory Agency for Investment in Energy and Mining): Approval of the procedure for reporting emergencies in mining.

There have been no incidents involving hospitalization or fatality.

There have been no incidents involving cyanide releases off the mine site requiring response or remediation.

There have been no incidents involving resulting in significant adverse effects to health or the environment.

There have been no incidents requiring reporting under applicable regulations.

There have been no incidents involving cyanide releases on or off the mine, resulting in significant adverse effects to health or the environment.

There have been no releases that are or that cause applicable limits for cyanide to be exceeded.

MINERA YANAQUIHUA, S.A.C

Name of Mine

Lead Auditor

March 16-18, 2014 & July 24-25, 201