IRMA Initiative for Responsible Mining Assurance

MINE SITE ASSESSMENT PUBLIC SUMMARY REPORT

MINE SITE

Carrizal's Zimapán Mine

OPERATING COMPANY

Carrizal Mining S.A. de C.V.

COUNTRY OF OPERATION

México, Hidalgo State

21 OCTOBER 2020

Acknowledgements

IRMA believes that third-party, independent audits are most credible when there is robust participation not only from participating mines, but also from workers and stakeholders, particularly those from affected communities.

Outside stakeholders are not remunerated for their participation, and willingly give their time to provide perspectives and information on mine site performance. IRMA would like to recognize Carrizal mine and plant workers, governmental representatives, and members of affected communities for their participation in this audit.

Table of Contents

Audit Details

Name of Mine:	Zimapán Mine (Carrizal and Monte mines)
Operating Company:	Carrizal Mining Company, S.A. de C.V.
Mine Owner:	Minera Cedros, S.A. de C.V.
Country of Operation:	Mexico
Mined Material(s):	Lead, zinc and copper concentrates with silver content
# Employees / contractors:	602 at the time of audit (all contract workers)
Mine site profile on IRMA's Responsible Mining Map:	https://map.responsiblemining.net/site/62
Audit Type:	Initial certification audit
Audit Dates:	24-29 February 2020 (Stage 2)
Audit Team:	Michelle Smith (Lead Auditor), Beth Evans (Social), Filipa Marques De Silva Vicente (Social and Environment), Eduardo Huergo (Occupational Health and Safety and Environment), Alex Teran (Environment), Paola Romero (Mexico Compliance expert), Casey Luongo (Translation)
Lead Auditor Declaration:	✓ The findings in this report are based on an objective evaluation of evidence (through review of documents; first-hand observations at the mine site; and interviews with mine staff, workers and stakeholders) as presented during the Stage 1 and Stage 2 audit activities. ✓ The audit team members were deemed to have no conflicts of interest with the mine. ✓ The audit team members were professional, ethical, objective and truthful in their conduct of audit activities. ✓ The information in this report is accurate according to the best knowledge of the auditors who contributed to the report.
Scope of Certification	Carrizal and Monte underground mines, processing plant, ancillary facilities, and other supporting activities for exploration, mining, processing and transport of copper, lead and zinc concentrates.
IRMA Standard Version:	IRMA Standard for Responsible Mining, v.1.0 (June 2018)
Certification Body (CB):	ERM CVS
CB Technical Reviewer:	Roberto Macedo
Certification Decision date:	10 October 2020
IRMA Reference Number:	IRMA-STD-ERM-001-L-00001

1. Mine Site Overview

1.1. Overview of Location

Carrizal Mining, S.A. de C.V. (Carrizal Mining) is based in the municipality of Zimapán, in the northwestern of the state of Hidalgo, Mexico. Zimapán is one of 84 municipalities in the state of Hidalgo. The municipal seat is the town of Zimapán.[1] The Plant and Monte Mine are located in the Community of San Francisco. The Carrizal Mine in the Benito Juarez ejido (area of communal land, used primarily for agriculture).

Operations are located in the foothills of the Sierra Madre Oriental, the relief is mountainous and rugged, formed by mountain ranges oriented Northwest-Southeast.[2] The predominant climate in this area is sub-humid to temperate, with an average annual temperature of 18.3° C, and summer rainfall (May to June), with annual average of between 391 and 458 millimeters per year.[3]

The most important surface water features in the municipality include Tula, Amajac, and Metztitlán rivers. The Tula River and the San Juan River merge to form the Moctezuma River, which is the natural border with the State of Querétaro, on the western side of the Municipality. Later it enters the State of San Luis Potosí and forms the Pánuco River.

In the rainy season small streams are formed that irrigate agricultural fields, such as those of Chepinque and Tolimán, where Carrizal Mining discharges water from underground mine dewatering activities. [4]

Around the Monte Mine, the main surface water bodies are Arroyo de Xodhe, Arroyo Verdosas, and Arroyo San Miguel. The Arroyo San Miguel is the main receiving body of the underground water discharge. [5]

Historical mining activities in the region have been identified as a source of water contamination, reduced availability of water, and impacted air quality. Zimapán Development Plan 2016-2020, included some strategic actions to address these issues, and are currently under evaluation to develop the next five-year plan.[6]

The municipality of Zimapán is a non-urban municipality spanning 874 square kilometers (km^2). It is home to a population of 38,516 with a population density of 44 people per kilometer (km). The majority of the economically active population is involved in agriculture and livestock activities as well as mining.[7] Zimapán municipality has five small and medium scale-mining operations and the mining industry is a main economic driver in the municipality. Carrizal Mining is the largest operator.

The town of Zimapán has a medium level of poverty while the other towns register high or very high levels. In total, 60 percent of the population of the municipality lives in poverty.[8] The

communities located within the area of influence of the Carrizal Mining operations display a high level of marginalization due to a lack of public services, such as access to potable water, drainage, paved roads, and electricity. Additionally, a number of remote communities have limited access to education and health facilities and are required to travel to Zimapán for services.

Zimapán has a high level of migration,[9] both youth and adults commonly migrate from smaller communities to the town of Zimapán for opportunities, as well as to the United States or to border towns. Remittances from family members in the United States are a main source of income for the municipality. Due to the current migration situation in the United States, some community members have migrated back to Zimapán and are looking for work in the mining industry.

The communities considered indigenous by the National Commission for the Development of the Indigenous Towns (the Comisión Nacional para el Desarrollo de los Pueblos Indígenas or CDI in Spanish) report that indigenous language and culture are not a common practice among residents, to the extent that some communities no longer self-identify as indigenous.

1.2. Overview of Mining Operation

The Carrizal Mining Company, S.A. de C.V. operates in the municipality of Zimapán, Hidalgo State, Mexico, extracting ore from Carrizal and Monte underground mines (the Mine) and processing the minerals at the San Francisco concentrator plant (the Plant) producing: lead, zinc and copper concentrates with Silver (Ag) contents. Monte Mine has proven and probable reserves of 2,315,507 tons of minerals, and Carrizal Mine 2,813,330 tons of minerals, with mine life expectation of 10 to 15 years as per the current operating plan (lead, zinc and copper).[10]

Carrizal Mining, subsidiary of Santacruz Silver Mining Ltd. entered into an agreement with Minera Cedros, S.A. de C.V. a wholly-own subsidiary of Grupo Peñoles, S.A.B. de C.V. (owner), to extend the expiry date of the current Zimapán Mine lease agreement until the end of 2020 to complete the sale negotiations.

Carrizal Mining started operations in January 2010. The mine currently operates with 602 full-time employees under contract, of which 570 are male and 68 are female.

The works carried out within the mines are exploration, preparation, drilling, blasting, mocking, and hauling ore by tanker trucks with 7-ton capacities to the Plant. The Plant is near the mouth of the Monte Mine, and is located about 11 km and 2.5 km from Carrizal Mine and Monte Mine respectively. The mining system currently used is long drilling and cut and fill with waste rock (tepetate). This filling is obtained from the preparation works carried out within the mines. Compressed air is used for drilling with jumbos and jack leg machines and for explosives charge in blast holes during blasting. Water is also used as part of the drilling process.

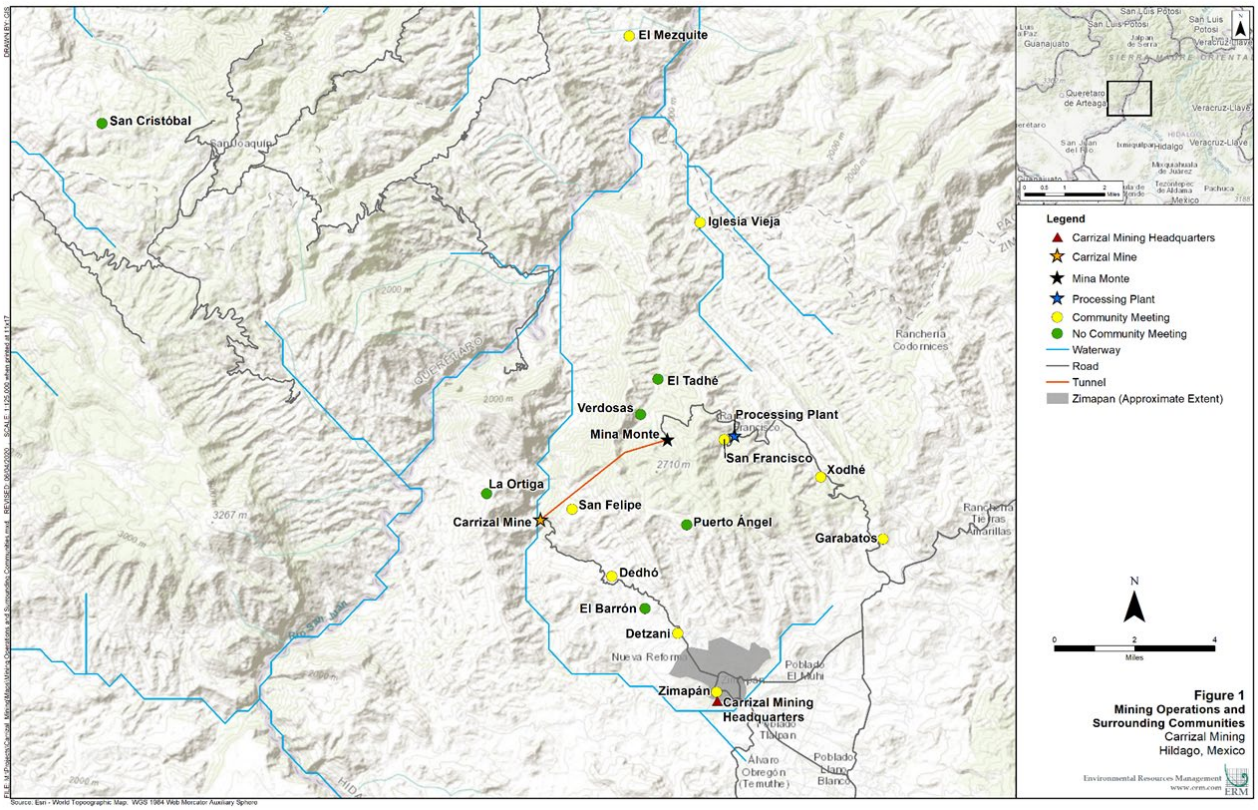
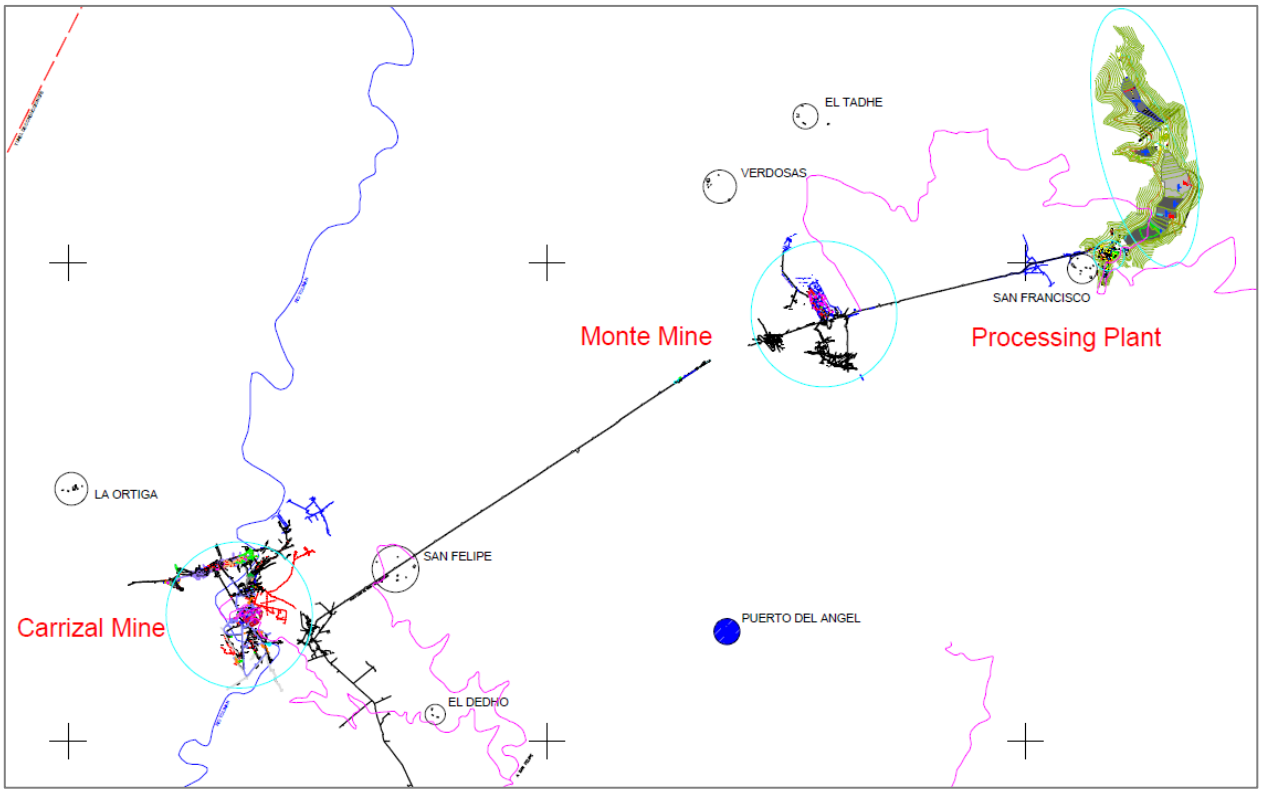


Figure 1
Mining Operations and Surrounding Communities
Carrizal Mining
Hildago, Mexico



2. Mine Site Assessment Process

2.1. Overview of IRMA Process

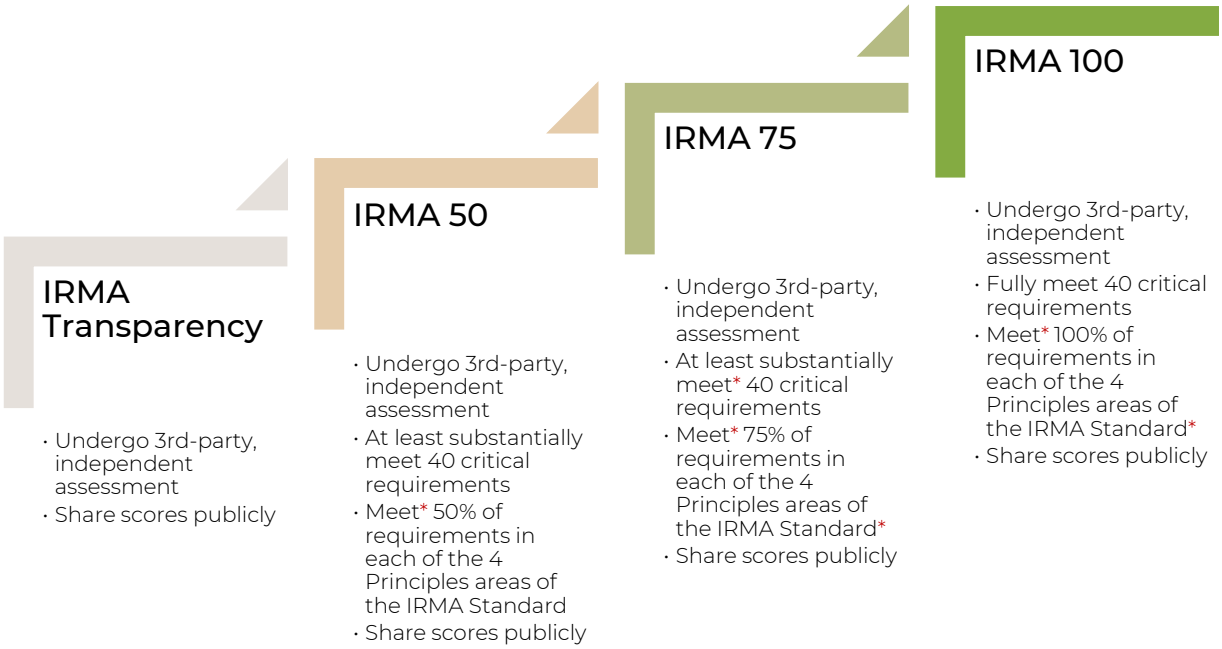
The mine site assessment process begins with mines completing a self-assessment and uploading evidence into an online tool (Mine Measure).[11] When the self-assessment has been completed, the independent, third-party assessment may begin.

Stage 1 of the independent, third-party assessment is a desk review carried by an IRMA-approved Certification Body, which puts together a team of auditors to review the self-assessment ratings and evidence provided by the mine site. During this stage of the audit additional information may be requested by auditors. Mines may also choose to take time to make improvements to practices prior to commencement of Stage 2.

Stage 2 is the on-site visit, which includes facility and site-based observations, additional review of materials and interviews with mine site personnel, workers, stakeholders and meetings with affected communities.

Based on observations, interviews and information evaluated during Stage 1 and Stage 2, auditors determine if mines are fully, substantially, partially or not meeting all of the IRMA Standard requirements relevant at the mine site. The decision regarding a mine site's achievement level is made by the Certification Body.

IRMA recognizes four levels of achievement. For a complete description of the assessment process and achievement levels, see IRMA's Certification Body Requirements, available on IRMA's web site.[12]



* Some minor non-conformance allowed as long as there is a timebound corrective action plan to come into full compliance.

2.1.1. Scope and limitation of audits

Within the IRMA system, independent, third-party assessment is a process by which mines are assessed against the IRMA Standard for Responsible Mining by external auditors. Audits are conducted by auditors who: have undergone IRMA training, meet IRMA competency requirements and have been deemed to have no conflicts-of-interest with the mine site under assessment.[13]

Audits are carried out in general conformance with established industry practice for independent audits (i.e., ISO 19011).[14] In addition to document review, audits include on-site visits of relevant facilities, review of records, and interviews with site personnel and relevant stakeholders.

Auditor evaluations are based upon the application of scientific principles and professional judgment to certain facts with resultant subjective interpretations. Professional judgments expressed in auditor comments are based on the facts available at the time of the audit within the limits of the existing data, scope of work, budget, and schedule.

Audit evidence is based on samples of available information. Therefore, there is an element of uncertainty in auditing, and those acting upon the audit conclusions should be aware of this uncertainty.

2.1.2. IRMA complaints process

If any IRMA stakeholder wishes to file a complaint related to the mine site assessment process, they may do by visiting the IRMA website.15 Details on the complaints process can be found in IRMA's Issues Resolution Procedure.[16]

2.2. Audit Process and Timeline

- Carrizal Mining completed the initial self-assessment in October 2019.
- ERM CVS carried out an initial Stage 1 desktop audit during November 2019. Based on feedback from ERM CVS, the self-assessment was updated and revised between December 2019 and January 2020.
- ERM CVS conducted a Stage 2 on-site audit in February 2020.

The on-site audit included a series of interviews with mine staff (workers and management team), relevant community representatives, local non-governmental organizations (NGOs), governmental agencies, documentation review and visit to operational areas including Carrizal underground mine, processing plant, tailing dam, reclamation areas, and several communities.

2.3. Stakeholder Engagement

IRMA requires that stakeholders be engaged as part of the mine site assessment process. Audits are announced by IRMA and certification bodies, and prior to the on-site audit there is additional outreach carried out by certification bodies.

2.3.1. Written comments/inquiries

ERM received two written inquiries prior to the audit. One stakeholder requested an interview, and auditors carried out a phone interview with that person in February 2020. The second inquiry was responded to through email correspondence.

2.3.2. Mine staff

The following individuals were interviewed as subject matter experts in one or more topics relevant to the IRMA standard. The positions listed were those held at the time of the audit.

Name	Position/Role
Carlos Silva	General Director
Sergio Duran	General Manager
Mireya Aguilar	Risks Manager and Community Engagement Lead
Alfonso Ramirez	Operations Manager
Luz Maria Sanchez	Technical Services Manager
Araceli Perez	Finance and Admin Manager
Vioel Espino	Projects and Rock Mechanic Superintendent
Itzel Andrea Silva H.	Human Capital Superintendent
Juan Carlos De La Torre	H&S Superintendent
Alma Calva Arroyo	Security Management
Gilberto Rojo	Environmental Superintendent
Juan Carlos Celis	Environmental Protection Coordinator
Rafael Lopez	Maintenance Superintendent (Process Plant)
Alejandro Alvarado	Process Plant Chief
Jessica Duran	Social Responsibility Coordinator
Pedro Guerrero	Superintendent of Costs and Budgets
Jorge Monroy	Superintendent of Security
Carlos Rauda	Legal Counsel
Lidia Martinez	Legal Counsel
Maribel Medina Rojo	General assistant to the Director
Edwin Driver	Internal Controls
Laura Beltran	Payroll
Sarai Gonzalez	Finance Department
Ricardo Tellez	Union Representative

2.3.3. Carrizal Mining contract employees/workers

ERM CVS facilitated a total of 110 scheduled worker engagements including group interviews (96 participants) and 14 individual interviews. These engagements took place on-site at the two mines (Monte and Carrizal mines) as well as at the beneficiation plant. These employee interviews were facilitated by Carrizal Mining management personnel but were conducted without management personnel present. Supervisors did not participate in any group meetings. Some supervisors were interviewed individually.

Mines	Carrizal Mine:
	3 individuals (one female, one male, one male supervisor)
	2 focus groups with 25 participants
	Monte Mine:
	2 individuals
	22 males (focus group #1), 24 males, 1 female (focus group #2)
Plant	7 individual interviews
Other	1 male, contractor supervisor / representative
	1 male worker / union representative
	Additionally, approximately 20 mine workers were interviewed over the course of operational area tours and inspections
	1 male, contractor supervisor / representative
	1 male worker / union representative

2.3.4. Government agencies

ERM CVS conducted extensive interviews with government agency representatives identified as having authority over or relationship with Carrizal Mining. These interviews were facilitated by Carrizal Mining personnel but were conducted without Carrizal Mining personnel present.

Government Institution / Function
Autoridad Municipal de Ecología y Medio Ambiente
Conafor
IMSS
Zimapán Municipality - Regulation
Subsecretario de Minería en la Secretaría de Economía
Ministry of Economic Development from the State of Hidalgo
Zimapán Police Department Chief
Zimapán Town Council
Hidalgo delegate for Ecology and Environmental Protection, Director

2.3.5. Participating communities and NGOs

In order to identify stakeholders relevant to the audit process, two social specialists performed a desktop review of local media sources with a social conflict lens and carried out a three-day social reconnaissance trip prior to the audit, between 5 and 7 February 2020.

During the Stage 2 audit, ERM CVS conducted community meetings with a number of communities located proximal to the Mine or with the potential to be impacted by the Mine. Due to time constraints, not all communities were engaged directly with ERM CVS auditors. The communities were selected based on the stakeholder mapping undertaken during the reconnaissance trip and the outcomes of the Stage 1 audit. Meetings were held in or near the communities in meeting locations typically used by the community to facilitate ease of access. Communication and organization of these meetings were facilitated by Carrizal Mining personnel but were conducted by ERM CVS auditors without Carrizal Mining personnel present. Meetings were held in the communities identified below. Spouses of workers were invited to participate in a meeting, with invitations distributed via mine personnel. No spouses attended this meeting.

Community Name	Location	Total Number of Attendees
Community Garabatos	School	31 (30 adults, 1 child)
Community Xodhé	Village square	11 (5 women, 5 men, 1 child)
Community Dedhó	Health Centre	16 (11 women, 5 men)
Community San Felipe	Community Centre Building	10 (6 women, 4 men)
Community Mezquite I & Iglesia Vieja (meeting done jointly)	Roadside meeting place	5 (2 women, 3 men)
Community San Francisco	Community Centre Building	12 (3 men 8 women, 1 child)
Community Detzaní	Community Centre Building	7 (6 + individual interview w/delegate)
Zimapán Secondary School parent meeting	Local school	18 (16 women, 2 men)
Local group concerned with water quality in Zimapán	Health House of San Miguel	8 attendees representing San Miguel, Mezquite, and Iglesia
Casa del Niño Indígena (House of the Indigenous Child)	Casa del Niño Indígena Cafeteria / Kitchen	2 (one male, one female)

2.4. Summary of Mine Facilities Visited

The following areas were visited or observed during the on-site visit:

Operational areas	Carrizal Mine (underground and exterior operational areas)
	Monte Mine (only above ground areas)
	Processing Plant (Mill)
	Active Tailings Dam No. 9
	Inactive tailings storage facilities
	Hazardous and non-hazardous waste storage areas
	General Offices in Zimapán
	Carrizal Mining corporate offices in Pachuca
Other areas visited	San Miguel stream
	Areas around other processing plants and inactive tailings located in the town of Zimapán
Surrounding Communities	Garabatos
	Xodhé
	San Francisco
	Iglesia Vieja
	Detzaní
	Dedhó
	San Felipe
	Zimapán

3. Summary of Findings

Detailed audit findings on a requirement-by-requirement basis can be found in Appendix 1.

3.1. Audit Outcome

The site is recognized as having achieved the level of IRMA Transparency based on the performance recorded as a result of the Stage 1 and Stage 2 audit activities. At this time, the site has elected to develop a corrective action plan that outlines steps to address non-conformities needed to reach the IRMA 50 achievement level. Implementation of these corrective actions will be assessed at subsequent audits.

3.2. Scores by IRMA Standard Principle and Chapter

	Chapter Relevant*	Actual Score	Possible Score	Percent Score
Principle 1: Business Integrity		**43**	**104**	**40.6%**
Chapter 1.1—Legal Compliance	Yes	3	12	25%
Chapter 1.2—Community and Stakeholder Engagement	Yes	18	26	69%
Chapter 1.3—Human Rights Due Diligence	Yes	8.5	22	39%
Chapter 1.4—Complaints Mechanism/Access to Remedy	Yes	11.5	22	52%
Chapter 1.5—Revenue and Payments Transparency	Yes	2	24	8%
Principle 2: Planning for Positive Legacies		**32**	**92**	**34.8%**
Chapter 2.1—Env/Soc Impact Assessment and Managem't	Yes	11.5	22	52%
Chapter 2.2—Free, Prior and Informed Consent	Yes	3	10	30%
Chapter 2.3—Community Support and Benefits	Yes	3	14	21%
Chapter 2.4—Resettlement	No	-	-	-
Chapter 2.5—Emergency Preparedness and Response	Yes	1	8	13%
Chapter 2.6—Planning/Financing Reclamation & Closure	Yes	13	38	36%
Principle 3: Social Responsibility		**77.5**	**156**	**49.7%**
Chapter 3.1—Fair Labor and Terms of Work	Yes	35	54	65%
Chapter 3.2—Occupational Health and Safety	Yes	22.5	46	50%
Chapter 3.3—Community Health and Safety	Yes	3	20	15%
Chapter 3.4—Conflict-Affected and High-Risk Areas	No	-	-	-
Chapter 3.5—Security Arrangements	Yes	10.5	24	48%
Chapter 3.6—Artisanal and Small-Scale Mining	No	-	-	-
Chapter 3.7—Cultural Heritage	Yes	6	12	42%

Principle 4: Environmental Responsibility		80.5	170	47.4%
Chapter 4.1—Waste and Materials Management	Yes	19.5	54	36%
Chapter 4.2—Water Management	Yes	19.5	38	51%
Chapter 4.3—Air Quality	Yes	10	18	56%
Chapter 4.4—Noise and Vibration	Yes	4.5	8	56%
Chapter 4.5—Greenhouse Gas Emissions	Yes	9	14	64%
Chapter 4.6—Biodiversity, Eco. Serv. and Protected Areas	Yes	15	28	54%
Chapter 4.7—Cyanide Management	Yes	3	10	30%
Chapter 4.8—Mercury Management	No	-	-	-

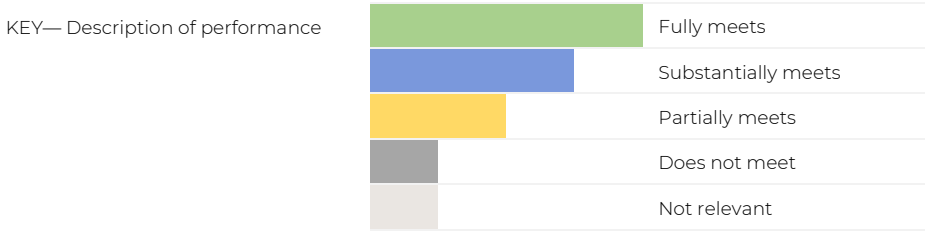
* Chapters are marked as not relevant if auditors have verified that the issues addressed in the chapter are not applicable at the mine site. For example, if the mine can demonstrate that there is no artisanal and small-scale mining (ASM) occurring near the mine, and the mine does not source materials from ASM operations then Chapter 3.6 would be marked as not relevant.

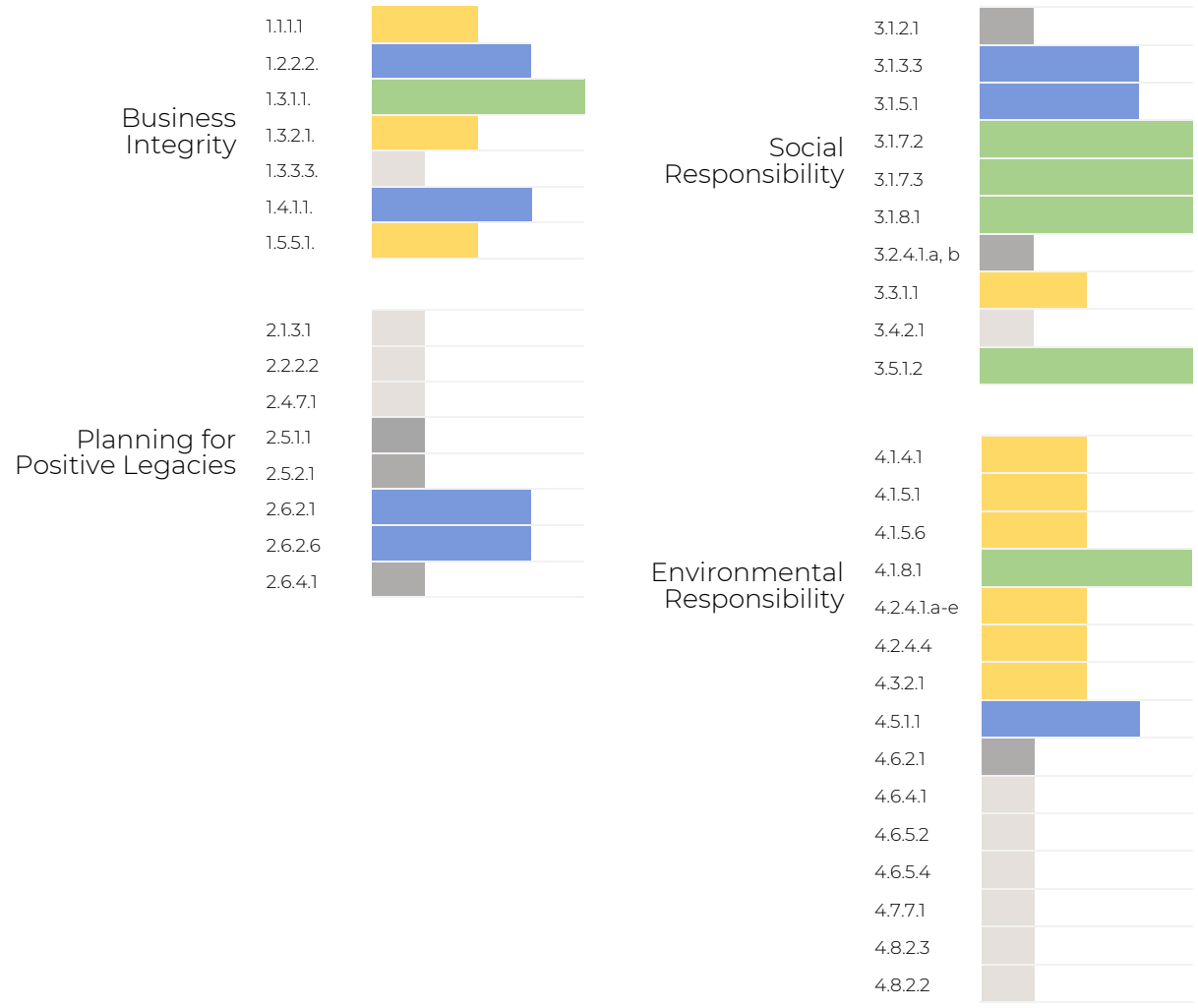
Chapters deemed Not Relevant do not factor into the Principle Scores.

3.3. Performance on Critical Requirements

Critical requirements consist of a set of 40 requirements that have been identified by the IRMA Board of Directors as being core requirements that any mine site claiming to be following good practices in mining should be meeting. Mines seeking to achieve full certification (IRMA 100) mines must fully meet all critical requirements, and mines achieving IRMA 50 or IRMA 75 must substantially meet all critical requirements, demonstrate progress over time, and fully meet all critical requirements within specified time frames.

3.3.1. Snapshot of performance on 40 critical requirements





3.3.2. Performance on 40 critical requirements.

RATING LEGEND
Description of performance

⊘	Fully meets
◔	Substantially meets
◑	Partially meets
⊗	Does not meet
—	Not relevant

Principle 1: Business Integrity

1.1.1.1	The operating company shall comply with all applicable host country laws in relation to the mining project.	◑
1.2.2.2.	The mine fosters two-way dialogue and meaningful engagement with stakeholders	◔
1.3.1.1.	The operating company has a policy in place that acknowledges its responsibility to respect all internationally recognized human rights.	⊘
1.3.2.1.	and an ongoing process to identify and assess potential and actual human rights impacts from mining project activities and business relationships.	◑
1.3.3.3.	The operating company is taking steps to remediate any known impacts on human rights caused by the mine.	—
1.4.1.1.	Stakeholders have access to operational-level mechanisms that allows them to raise and seek resolution or remedy for complaints and grievances that may occur in relation to the mining operation.	◔
1.5.5.1.	The operating company has developed, documented and implemented policies and procedures that prohibit bribery and other forms of corruption by employees and contractors.	◑

Principle 2: Planning for Positive Legacies

2.1.3.1	The operating company has carried out a process to identify potential impacts (social and environmental) of the mining project.	—
2.2.2.2.	New mine sites have obtained the FPIC of indigenous peoples, and existing mines either have obtained FPIC or can demonstrate that they are operating in a manner that supports positive relationships with affected indigenous peoples and provides remedies for past impacts on indigenous peoples' rights and interests.	—
2.4.7.1.	If resettlement has occurred, the mine monitors and evaluates its implementation and takes corrective actions until the provisions of resettlement action plans and/or livelihood restoration plans have been met.	—
2.5.1.1.	All operations related to the mining project shall have an emergency response plan	⊗
2.5.2.1.	and there is community participation in emergency response planning exercises.	⊗
2.6.2.1.	Reclamation and closure plans are compatible with protection of human health and the environment,	◔
2.6.2.6.	and are available to stakeholders.	◔
2.6.4.1.	Financial surety instruments are in place for mine closure and post-closure (including reclamation, water treatment and monitoring).	⊗

Principle 3: Social Responsibility

3.1.2.1	Workers' freedom of association is respected.	⊗
3.1.3.3.	Measures are in place to prevent and address harassment, intimidation, and/or exploitation, especially in regard to female workers.	◔
3.1.5.1.	Workers have access to operational-level mechanisms that allows them to raise and seek resolution or remedy for complaints and grievances that may occur in relation to workplace-related issues.	◔
3.1.7.2.	No children (i.e., persons under the age of 18) are employed to do hazardous work	✓
3.1.7.3.	and no children under the age of 15 are employed to do non-hazardous work.	✓
3.1.8.1.	There is no forced labor at the mine site or used by the operating company.	✓
3.2.4.1.a, b	Workers are informed of hazards associated with their work, the health risks involved and relevant preventive and protective measures.	⊗
3.3.1.1.	The risks to community health and safety posed by the mining operation are evaluated and mitigated.	◐
3.4.2.1.	If operating in a conflict-affected or high-risk area, the mine has committed to not support any parties that contribute to conflict or the infringement of human rights.	—
3.5.1.2.	The mine has policy and procedures in place that align with best practices to limit the use of force and firearms by security personnel.	✓

Principle 4: Environmental Responsibility

4.1.4.1.	A risk assessment has been done to identify chemical and physical risks associated with existing mine waste (including tailings) facilities.	◐
4.1.5.1.	Mine waste facility design and mitigation of identified risks shall be consistent with best available technologies and best available/applicable practices.	◐
4.1.5.6.	The operating company regularly evaluates the performance of mine waste facilities to assess the effectiveness of risk management measures, including critical controls for high consequence facilities.	◐
4.1.8.1.	The mine does not use riverine, submarine or lake disposal for mine wastes.	✓
4.2.4.1.a-e	Water quality and quantity are being monitored at the mine site	◐
4.2.4.4	and adverse impacts resulting from the mining operation are being mitigated.	◐
4.3.2.1.	When significant potential impacts on air quality are identified, the mine develops measures to avoid and minimize adverse impacts on air quality, and documents them in an air quality management plan.	◐
4.5.1.1.	There is a policy being implemented that includes targets for reducing greenhouse gas emissions.	◔
4.6.2.1.	The mine has carried out screening to evaluate its potential impacts on biodiversity, ecosystem services and protected areas	⊗
4.6.4.1.	and these impacts are being mitigated and minimized.	—
4.6.5.2.	New mines are not located in or adversely affect World Heritage Sites (WHS), areas on a State Party's official Tentative List for WHS Inscription, IUCN protected area management categories I-III, or core areas of UNESCO biosphere reserves	—
4.6.5.4.	and existing mines located in those areas ensure that activities during the remaining mine life cycle will not permanently and materially damage the integrity of the special values for which the area was designated or recognized.	—
4.7.1.1.	Gold or silver mines using cyanide are certified as complying with the Cyanide Code.	—

4.8.2.3.	Mercury wastes are not permanently stored on site without adequate safeguards,	—
4.8.2.2.	are not sold or given to artisanal or small-scale miners, and are otherwise sold only for end uses covered in the Minamata Convention or disposed of in regulated repositories.	—

4. Next Steps

4.1. Corrective Action Plans

Carrizal Mining Operation is in the process of preparing a Corrective Action Plan to address non-conformities with critical and other requirements, with the goal of improving performance to achieve IRMA 50 during this audit cycle.

4.2. Disclosure of Summary Audit Report

IRMA requires that all mines that undergo independent, third-party auditing disclose a summary audit report within 12 months of an audit to maintain good standing in the IRMA system.

Carrizal's public summary report will be posted on the IRMA web site, and also on the Carrizal Mine's profile on the Responsible Mining Map.[17]

4.3. Timing of Future Audits

In the IRMA system, mines are allowed a 12-month corrective action period if they are interested in addressing non-conformities with critical or other requirements to reach a higher achievement level or gain recognition for improved performance. This enables them to implement changes and have them verified by auditors without waiting until the surveillance or recertification audit.

Carrizal Mining has indicated to ERM CVS that the company is seeking an achievement level of IRMA 50, and may make use of the 12-month corrective action period to address non-conformities. If the company believes it has reached IRMA 50 in the next 12-months, it can schedule a reassessment audit to evaluate the closing of those non-conformities. If such an audit does not occur, the mine's surveillance audit must occur within the next 18 months.

APPENDIX–Results by Requirement

Principle 1: Business Integrity

RATING LEGEND
Description of performance

✓	Fully meets
◕	Substantially meets
◑	Partially meets
⊗	Does not meet
—	Not relevant

Chapter 1.1—Legal Compliance			Basis for rating
1.1.1.1.	Critical The operating company shall comply with all applicable host country laws in relation to the mining project.	◑	The mine has minimal tools for documenting regulatory requirements that involve regular notification from agencies, such as annual fees to be paid for permits or licenses. The site does not have a systematic way of identifying and tracking all regulatory requirements including updates. The site does not perform self-audits for compliance.
1.1.2.1.	The operating company shall comply with whichever provides the greatest social and/or environmental protections of host country law or IRMA requirements. If complying fully with an IRMA requirement would require the operating company to break host country law then the company shall endeavor to meet the intent of the IRMA requirement to the extent feasible without violating the law.	—	No conflicts between host country law and IRMA were identified.
1.1.3.1.	If non-compliance with a host country law has taken place, the operating company shall be able to demonstrate that timely and effective action was taken to remedy the non-compliance and to prevent further non-compliances from recurring.	⊗	
1.1.4.1.	The operating company shall demonstrate that it takes appropriate steps to ensure compliance with the IRMA Standard by contractors engaged in activities relevant to the mining project.	⊗	
1.1.5.1.	The operating company shall maintain records and documentation sufficient to authenticate and demonstrate compliance and/or non-compliance with host country laws and the IRMA Standard.	⊗	
1.1.5.2.	Records related to compliance and/or non-compliance with host country laws shall be made available to IRMA auditors, and shall include descriptions of non-compliance events	◑	The legal team did not indicate that there would be a problem disclosing documentation to the IRMA audit team; however, the legal team was unable to identify any non-compliances

	and ongoing and final investigations, allegations, discussions, and final remedies.		reported to them by agencies as they do not keep records of these but pass them to depts to resolve independently. They do provide a review of their plan to ensure compliance with the law.
1.1.5.3.	Upon request, operating companies shall provide stakeholders with a summary of the mining project's regulatory non-compliance issues that are publicly available.	◐	A process was verbally described of how responses to stakeholder requests would be managed but this process has not been documented. The described process included a presumption that stakeholders would be referred to the public document request process.
1.1.5.4.	Where the operating company claims that records or documentation contains confidential business information, it shall: a. Provide to auditors a general description of the confidential material and an explanation of the reasons for classifying the information as confidential; and b. If a part of a document is confidential, only that confidential part shall be redacted, allowing for the release of non-confidential information.	—	No information was withheld from the audit team on the basis of confidentiality.

Chapter 1.2—Community and Stakeholder Engagement			Basis for rating
1.2.1.1.	The operating company shall undertake identification and analysis of the range of groups and individuals, including community members, rights holders and others (hereafter referred to collectively as "stakeholders") who may be affected by or interested in the company's mining-related activities.	◐	The mine has done a community-level assessment and identified other relevant stakeholder groups, but they have not drilled down to the individual level at all. 'Vulnerability' is defined by remoteness of the community and potential (environmental) impacts of the project. They have plans to do a socio-economic study within the communities, however they have not yet done so. They have begun doing "encuestas" (surveys) in communities (one completed to date) as a "first pass" at this study. The study is aimed at supplementing the out-of-date national census to better understand the communities impacted by the mine.
1.2.1.2.	A stakeholder engagement plan scaled to the mining project's risks and impacts and stage of development shall be developed, implemented and updated as necessary.	◔	The mine developed a stakeholder engagement plan very recently (October 2019) that outlines a more robust and formalized programme for engagement. This plan, however, does not describe regulatory requirements for consultation / engagement, it does not identify and prioritize key stakeholders beyond generalizations made at the community level, and it does not describe how activities will be incorporated into the company's management system, or what resources will be dedicated to implementation. It does, however, provide a strategy and timeline for sharing information with stakeholders, and plans for updating the engagement plan based on community feedback. Consultations with communities suggest that visits from the company have increased since October, and some of them have clear timelines for them the company will be

			returning to have further discussions, and what the topics of these discussions will be.
1.2.1.3.	The operating company shall consult with stakeholders to design engagement processes that are accessible, inclusive and culturally appropriate, and shall demonstrate that continuous efforts are taken to understand and remove barriers to engagement for affected stakeholders (especially women, marginalized and vulnerable groups).		The mine has not consulted directly with stakeholders concerning the engagement plan itself, however they have taken measures to ensure their engagement efforts are culturally appropriate. This includes meeting on Sundays when a broad variety of people are available, and going through community structures (i.e. community delegates) to ensure broad-based support. They provide all of their information both verbally and in writing to accommodate varying literacy levels. The involvement of vulnerable people is facilitated by their Sunday meetings and giving advance notice of their visits to allow people to plan. They hold meetings in central locations to which all have access, although make no other efforts to ensure vulnerable populations are included. They also have not done an assessment of barriers to participation. They provide a number of ways communities can contact them, including by phone, email, through suggestion boxes, and in-person meetings; however, they do not evaluate barriers to doing so for marginalized individuals without access to phone / email / transportation.
1.2.1.4.	The operating company shall demonstrate that efforts have been made to understand community dynamics in order to prevent or mitigate community conflicts that might otherwise occur as a result of company engagement processes.		Carrizal has conversed with affected communities concerning their structures and habits, and what is most appropriate for engagement purposes. This includes requiring the consent of the local delegate to approach the community, meeting on Sundays when and where it is most convenient for the communities, and allowing community members who do not support the delegates to directly approach them directly for support (in this latter case, they act as intermediaries to contact the delegate to receive support / affirmation that the project benefits the community).
1.2.2.1.	Stakeholder engagement shall begin prior to or during mine planning, and be ongoing, throughout the life of the mine. (Note: existing mines do not need to demonstrate that engagement began prior to mine planning)		Carrizal has, since October 2019, engaged in regular meetings with the affected communities, and have a plan for continued engagement. At least one of the visited communities reported that they had been given specific dates as to when the company would return to speak with them again, and almost all communities (even those that were more critical of the mine) stated that they were able to approach the company at any point in their offices to discuss issues of interest. Most but not all of the communities felt that the attention they received from the company was adequate.
1.2.2.2.	Critical The operating company shall foster two-way dialogue and meaningful engagement with stakeholders by: a. Providing relevant information to stakeholders in a timely manner;		Since October 2019 Carrizal has developed and begun to implement a stakeholder engagement plan that involves regular visits to the communities, perception surveys (to date only complete in one community), and the ability to give and receive feedback from the company. In speaking with the communities, most but not all

	b. Including participation by site management and subject-matter experts when addressing concerns of significance to stakeholders; c. Engaging in a manner that is respectful, and free from manipulation, interference, coercion or intimidation; d. Soliciting feedback from stakeholders on issues relevant to them; and e. Providing stakeholders with feedback on how the company has taken their input into account.		felt that the attention they received from the company was adequate. They provided records of their surveys and visits to the communities, although their future visits were agreed upon verbally and not included in the plan. However, at least one of the communities sampled were aware of when the company would be returning to follow-up on community needs, etc. All communities reported being able to approach the Carrizal staff personally, and with the exception of one community, they said that Carrizal received them well and listened to their concerns. Communities reported that Carrizal has taken into consideration community feedback concerning their needs and preferences, but only a limited number of communities have received information about their right to launch formal / confidential grievances about the project. The Carrizal employee doing the majority of the community engagement (social responsibility coordinator) is well-respected among the communities.
1.2.2.3.	The operating company shall collaborate with stakeholders, including representatives from affected communities, to design and form stakeholder engagement mechanism(s) (e.g., a permanent advisory committee, or committees dedicated to specific issues), to provide stakeholder oversight of the mining project's environmental and social performance, and/or input to the company on issues of concern to stakeholders.	◐	Carrizal does not have an oversight committee; their reasoning is that many people in the communities don't actually live in the communities full time, so if they make a formal / permanent committee it would be of only the people who are constantly available and therefore would exclude a lot of people who come and go (like youth). They therefore prefer to work through the local delegates and to associate with communities individually. However, they have solicited insight from community members as to the best way to engage with communities, such as working through local delegates, etc. as mentioned above. The communities expressed satisfaction with this individualized, delegate-based approach.
1.2.2.4.	Engagement processes shall be accessible and culturally appropriate, and the operating company shall demonstrate that efforts have been made to include participation by women, men, and marginalized and vulnerable groups or their representatives.	◔	Carrizal has conversed with the communities concerning their cultural / organizational structures and habits, and what is most appropriate for engagement purposes. This includes requiring the consent of the local delegate to approach the community, meeting on Sundays when and where it is most convenient for the communities, and allowing community members who do not support the delegates to directly approach them directly for support (in this latter case, they act as intermediaries to contact the delegate to receive support / affirmation that the project benefits the community). They define 'vulnerable' populations at the community level, based on their level of marginalization from the mine. In this respect, they make efforts to reach the most marginalized communities. They do not, however, make any specific arrangements that facilitate the participation of the most vulnerable individuals within affected communities.

1.2.2.5.	When stakeholder engagement processes depend substantially on community representatives, the operating company shall demonstrate that efforts have been made to confirm whether or not such persons represent the views and interests of affected community members and can be relied upon to faithfully communicate relevant information to them. If this is not the case, the operating company shall undertake additional engagement processes to enable more meaningful participation by and information sharing with the broader community.	✓	Carrizal prefers to work through the local delegates. Carrizal also inquires within the communities about local support for delegates, and allows community members who do not support the delegates to directly approach them directly for support (in this latter case, they act as intermediaries to contact the delegate to receive support / affirmation that the project benefits the community). However, the mine provided no specific evidence or examples of instances in which this had occurred. The communities expressed satisfaction with this delegate-based approach, and none expressed the existence of an alternate authority structure or claimed to be un-represented by their delegates. These delegates are elected at the community level, and communities expressed broad-based support for their chosen delegates.
1.2.2.6.	The operating company shall document engagement processes, including, at minimum, names of participants, and input received from and company feedback provided to stakeholders.	◔	Carrizal has been keeping more traceable records of their engagement since October 2019, and report back on this information (number of meetings, etc.) to their executives in an internal meeting. They keep record of formal notifications to the communities of their visits and take attendance at most meetings, and also track all written requests from the communities. They admit that they need to improve in record keeping. They do not use a central database to track engagements but have most interactions in hard copy in their offices.
1.2.2.7.	The operating company shall report back to affected communities and stakeholders on issues raised during engagement processes.	✓	Carrizal routinely provides responses to requests for support from the communities, which is the primary form of interaction they have had to date. They keep record of their written responses in hard copy. Most communities report an improvement as of late with respect to the company reporting back to them on issues raised during interactions. This applies even to those that are critical of the mine (i.e. they always receive a response, even if they do not like the answer).
1.2.3.1.	The operating company shall offer to collaborate with stakeholders from affected communities to assess their capacity to effectively engage in consultations, studies, assessments, and the development of mitigation, monitoring and community development strategies. Where capacity gaps are identified, the operating company shall offer appropriate assistance to facilitate effective stakeholder engagement.	✗	
1.2.4.1.	Any information that relates to the mine's performance against the IRMA Standard shall be made available to relevant stakeholders upon request, unless the operating company deems the request to be unreasonable or the information requested is legitimate confidential business information. If part of a document is confidential only that confidential part shall be	—	Carrizal has not shared nor received any requests for information relating to their performance vis-à-vis the IRMA standard as they do not yet have formal information pertaining to their results.

	redacted, allowing for the release of non-confidential information.		
1.2.4.2.	If original requests for information are deemed unreasonable, efforts shall be made by the operating company to provide stakeholders with overviews or summaries of the information requested.	—	Carrizal has not received any requests for information (including requests they could not accommodate fully). Interviews with the communities did not reveal and requests for information (unmet or otherwise), as the majority of the communities' interactions with the mine are requests for material support, not information.
1.2.4.3.	Communications shall be carried out and information shall be provided to stakeholders in a timely manner, and shall be in formats and languages that are culturally appropriate and accessible to affected communities and stakeholders	◔	Carrizal has not received any requests for information (including requests they could not accommodate fully). Interviews with the communities did not reveal and requests for information (unmet or otherwise), as the majority of the communities' interactions with the mine are requests for material support, not information. However, requests for material support, etc. are typically responded to in a timely manner, and communicated both in writing and verbally to the communities.
1.2.4.4.	If requests for information are not met in full, or in a timely manner, the operating company shall provide stakeholders with a written justification for why it has withheld information.	—	Carrizal has not received any requests for information (including requests they could not accommodate fully). Interviews with the communities did not reveal and requests for information (unmet or otherwise), as the majority of the communities' interactions with the mine are requests for material support, not information. However, requests for material support, etc. are typically responded to in a timely manner, and communicated both in writing and verbally to the communities.

Chapter 1.3—Human Rights Due Diligence			Basis for rating
1.3.1.1.	Critical The operating company shall adopt a policy commitment that includes an acknowledgement of its responsibility to respect all internationally recognized human rights	✓	Carrizal adopted a Human Rights Policy that was provided showing Carrizal commitment with respecting internationally recognized human rights international standards. Grievance mechanism is mentioned in the policy.
1.3.1.2.	The policy shall: a. Be approved at the most senior level of the company; b. Be informed by relevant internal and/or external expertise; c. Stipulate the operating company's human rights expectations of personnel, business partners and other parties directly linked to its mining project; d. Be publicly available and communicated internally and externally to all personnel, business partners, other relevant parties and stakeholders; e. Be reflected in the mining project's operational policies and procedures.	◐	The policy is approved at the most senior level of the company and it was communicated by Carrizal to a sample of communities and workers (including a sample of contractors). The policy stipulates the operating company's human rights expectations of workers, contractors and communities linked to Carrizal. The policy is not yet publicly available. The policy is not being totally reflected and integrated in the mining operations.
1.3.2.1.	Critical The operating company shall establish an ongoing process to identify and assess potential human rights impacts (hereafter	◐	The first stand-alone assessment was recently completed including workers (including mine contractors), however it doesn't

	referred to as human rights "risks") and actual human rights impacts from mining project activities and business relationships. Assessment of human rights risks and impacts shall be updated periodically, including, at minimum, when there are significant changes in the mining project, business relationships, or in the operating environment.		identify/distinguish potential human rights impacts and actual human rights impacts from mining project activities and business relationships. The same kind of assessment is being now completed for a couple of communities; however, the report was not available at the time of audit. The mine has not documented a Carrizal-specific methodology that establishes concepts in alignment with IRMA requirements. Carrizal not yet implemented the assessment methodology with other potential relevant parties (e.g. potentially affected communities). Only internal resources only (Human Capital and Social areas) are implementing the assessment.
1.3.2.2.	Assessments, which may be scaled to the size of the company and severity of human rights risks and impacts, shall: a. Follow a credible process/methodology; b. Be carried out by competent professionals; and c. Draw on internal and/or external human rights expertise, and consultations with potentially affected rights holders, including men, women, children (or their representatives) and other vulnerable groups, and other relevant stakeholders.	◐	The applied methodology with workers and communities included the presentation of HR Policy and grievance mechanism and finally questionnaire about any potential HR violation from Carrizal. The methodology was adapted from UN, however it does not establish a scoping for, or identification of, the salient human rights issues, assessment of the severity of human rights risks and impacts, periodicity or method for ongoing practices or updates. The assessment was completed the Human Capital and Social areas. Only workers and some communities have been included so far in the assessment.
1.3.2.3.	As part of its assessment, the operating company shall document, at minimum: a. The assessment methodology; b. The current human rights context in the country and mining project area; c. Relevant human rights laws and norms; d. A comprehensive list of the human rights risks related to mining project activities and business relationships, and an evaluation of the potential severity of impacts for each identified human rights risk; e. The identification of rights holders, an analysis of the potential differential risks to and impacts on rights holder groups (e.g., women, men, children, the elderly, persons with disabilities, indigenous peoples, ethnic or religious minority groups, and other disadvantaged or vulnerable groups), and a disaggregation of results by rights holder group; f. Recommendations for preventing, mitigating and remediating identified risks and impacts, giving priority to the most salient human rights issues.	◐	The assessment methodology and a list of laws and norms are documented. The methodology does not indicate how the results of the assessment provide inputs for the risk assessment. The assessment was mainly focused on workers so far; the process with the communities is ongoing. The current human rights context in Zimapán and in Mexico is not documented. The assessed human rights risks are presented in the assessment results (used to solicit worker feedback) and the list of laws and norms also mention the human rights, however, these are not in relation to mining project activities, business relationships or rights holder's needs. No severity evaluation of impacts for each identified human rights risk was completed. Recommendations for preventing, mitigating and remediating identified risks and impacts (for workers assessment) was reviewed, however, no priorities were assigned.
1.3.2.4.	At minimum, stakeholders and rights holders who participated in the assessment process shall have the opportunity to review draft key issues and findings that are relevant to them, and shall be consulted to provide feedback on those findings.	⊗	
1.3.2.5.	The operating company shall demonstrate that steps have been taken to effectively integrate	◐	Carrizal provided some evidence of actions taken to integrate assessment findings at the mine site

	assessment findings at the mine site operational level.		operational level, for instance related with PPE provision; however, an action related to ventilation had no follow-up or deadline. This topic was found of major significance.
1.3.3.1.	Mining project stakeholders shall have access to and be informed about a rights-compatible grievance mechanism and other mechanisms through which they can raise concerns and seek recourse for grievances related to human rights.	◔	According to information provided through workers interviews and focus groups, the grievance mechanism in place is suitable for any kind grievances; however, in case they have any grievance to report, they would prefer to talk directly to their supervisors. In addition, some communities were not aware of the grievance mechanism yet. The Carrizal Mining website has a grievance mechanism publicly available (http://www.carrizalm.com/buzon-de-quejas).
1.3.3.2.	Responding to human rights risks related to the mining project: a. If the operating company determines that it is at risk of causing adverse human rights impacts through its mining-related activities, it shall prioritize preventing impacts from occurring, and if this is not possible, design strategies to mitigate the human rights risks. Mitigation plans shall be developed in consultation with potentially affected rights holder(s). b. If the operating company determines that it is at risk of contributing to adverse human rights impacts through its mining-related activities, it shall take action to prevent or mitigate its contribution, and use its leverage to influence other contributing parties to prevent or mitigate their contributions to the human rights risks. c. If the operating company determines that it is at risk of being linked to adverse human rights impacts through its business relationships, it shall use its leverage to influence responsible parties to prevent or mitigate their risks to human rights from their activities.	⊗	
1.3.3.3.	Critical Responding to actual human rights impacts related to the mining project: a. If the operating company determines that it has caused an actual human rights impact, the company shall: i. Cease or change the activity responsible for the impact; and ii. In a timely manner, develop mitigation strategies and remediation in collaboration with affected rights holders. If mutually acceptable remedies cannot be found through dialogue, the operating company shall attempt to reach agreement through an independent, third-party mediator or another means mutually acceptable to affected rights holders; b. If the operating company determines that it has contributed to an actual human rights impact, the company shall cease or change any activities that are contributing to the impact, mitigate and remediate impacts to the extent of its contribution, use its leverage to influence other contributing parties to cease or	—	No actual human rights impacts related to the mining project have been reported.

	change their activities, and mitigate and remediate the remaining impact; c. If the operating company determines that it is linked to an actual human rights impact through a business relationship the company shall use its leverage to prevent or mitigate the impact from continuing or recurring; and d. The operating company shall cooperate with other legitimate processes such as judicial or State-based investigations or proceedings related to human rights impacts that the operating company caused, contributed to, or was directly linked to through its business relationships.		
1.3.4.1.	The operating company shall monitor whether salient adverse human rights risks and impacts are being effectively addressed. Monitoring shall include qualitative and quantitative indicators, and draw on feedback from internal and external sources, including affected rights holders.	⊗	
1.3.4.2.	External monitoring of an operating company's human rights due diligence shall occur if the company's due diligence efforts repeatedly fail to prevent, mitigate or remediate actual human rights impacts; or if its due diligence activities failed to prevent the company from unknowingly or unintentionally causing, contributing to or being linked to any serious human rights abuse. Additionally: a. The company shall fund the external monitoring; and b. The form of such monitoring, and selection of external monitors, shall be determined in collaboration with affected rights holders.	—	No actual human rights impacts related to the mining project have been reported, as such no external monitoring of human rights due diligence has been initiated.
1.3.5.1.	The operating company or its corporate owner shall periodically report publicly on the effectiveness of its human rights due diligence activities. At minimum, reporting shall include the methods used to determine the salient human rights issues, a list of salient risks and impacts that were identified, and actions taken by the operating company to prevent, mitigate and/or remediate the human rights risks and impacts.	⊗	
1.3.5.2.	If relevant, the operating company shall publish a report on external monitoring findings and recommendations to improve the operating company's human rights due diligence, and the operating company shall report to relevant stakeholders and rights holders on its plans to improve its due diligence activities as a result of external monitoring recommendations.	—	No actual human rights impacts related to the mining project have been reported, as such no external monitoring of human rights due diligence has been initiated.
1.3.5.3.	Public reporting referred to in 1.3.5.1 and 1.3.5.2 may exclude information that is politically sensitive, confidential business information, or that may compromise safety or place any individual at risk of further victimization.	—	No actual human rights impacts related to the mining project have been reported, as such no external monitoring of human rights due diligence has been initiated.

Chapter 1.4—Complaints and Grievance Mechanism and Access to Remedy			Basis for rating
1.4.1.1.	Critical The operating company shall ensure that stakeholders, including affected community members and rights holders (hereafter referred to collectively as "stakeholders") have access to an operational-level mechanism that allows them to raise and seek resolution or remedy for the range of complaints and grievances that may occur in relation to the company and its mining-related activities.		The company has a formal grievance mechanism and the vast majority of workers are aware of it (from posters and suggestion boxes posted around the mine sites and main offices). The workers knew this was a way to make confidential / anonymous complaints, but most preferred to go straight to their supervisors with their issues. The company provided evidence of having presented the grievance mechanism to the workers at their inception training (photos, presentation, brochures, and attendance list) and a good percentage of workers recalled having received this training. Only one community has been notified of the existence of a formal grievance mechanism, and they recalled having had it explained to them recently. The company has plans to notify other communities in the near future, as laid out in their Engagement Plan, but they have not yet done so. Therefore although communities have access to the grievance mechanism, they are not aware of its existence and / or how to use it. Nevertheless, all communities have access to mine personnel at the mine's offices, and are able to address issues in person or submit grievances confidentially on site (although access for marginalized communities might be limited, as described below).
1.4.2.1.	The operating company shall consult with stakeholders on the design of culturally appropriate complaints and grievance procedures that address, at minimum: a. The effectiveness criteria outlined in Principle 31 of the United Nations Guiding Principles on Business and Human Rights, which include the need for the mechanism to be: (a) Legitimate, (b) Accessible, (c) Predictable, (d) Equitable, (e) Transparent, (f) Rights-compatible, (g) A source of continuous learning, and (h) Based on engagement and dialogue; b. How complaints and grievances will be filed, acknowledged, investigated, and resolved, including general timeframes for each phase; c. How confidentiality of a complainant's identity will be respected, if requested; d. The ability to file anonymous complaints, if deemed necessary by stakeholders; e. The provision of assistance for those who may face barriers to using the operational-level grievance mechanism, including women, children, and marginalized or vulnerable groups; f. Options for recourse if an initial process does not result in satisfactory resolution or if the		There was no evidence of co-design of the mechanism, but opportunities for feedback given to workers only (not communities). The mechanism is accessible, predictable, and equitable to the extent that everyone can access it, although for remote communities the company has made no specific accommodations to facilitate submission of formal grievances (communities can travel to the mine site / offices, or can submit in person when visited by mine staff, but the former is quite difficult for those with no means of transportation and the latter is not anonymous). Communities can also submit grievances online, if they have internet access. The transparency of the mechanism could not be assessed due to the low number of people actually using it, thus preventing feedback on whether the responses received were decided on transparently. The mechanism is rights-compatible in that it provides options for confidentiality, but due to lack of tracking of non-written grievances opportunities for learning are limited, as is engagement and dialogue pertaining to the mechanism's characteristics and their appropriateness for the target population.

	mechanism is inadequate or inappropriate for handling serious human rights grievances; and g. How complaints and grievances and their resolutions will be tracked and recorded.		
1.4.2.2.	The operating company shall ensure that all complaints and grievance procedures are documented and made publicly available.	◐	The complaints made through the grievance mechanism are not publicly available. The grievance policy is not available to the general public or the workers/communities, except upon request. NOTE: there is a way for stakeholders to submit complaints online (http://www.carrizalm.com/buzon-de-quejas) but their policy on grievances is not public. The information provided to the workers and the communities (although the company has only to date contacted one community concerning the mechanism) is only information on how to use the mechanism (i.e. the ways in which they can submit) rather than providing any broader information on policies/procedures or grievances submitted.
1.4.3.1.	No remedy provided by an operational-level grievance mechanism shall require aggrieved parties to waive their right to seek recourse from the company for the same complaint through other available mechanisms, including administrative, non-judicial or judicial remedies.	✓	The company's grievance procedure does not include a waiver clause and says appeals are possible and that legal recourse always an option. Relevant staff confirmed knowledge of this component.
1.4.4.1.	Complaints and grievances and their outcomes and remedies shall be documented.	◐	The company only tracks grievances submitted in writing. Only six workers have used the formal grievance mechanism in this way since it was implemented, and they have record of these grievances and responses given (along with timeframes) in instances where the grievance was not anonymous (at the time of the audit, 2 / 6 grievances were new so no response had been given as of the time of the audit in February 2020). The company does not track grievances submitted verbally or through informal means (i.e. direct contact between employees or community and company).
1.4.4.2.	The operating company shall monitor and evaluate the performance of the operational-level complaints and grievance mechanism over time to determine: a. If changes need to be made to improve its effectiveness as per 1.4.2.1.a; b. If changes in company activities can be implemented to prevent or mitigate similar grievances in the future; and c. If outcomes and remedies provided through the mechanism accord with internationally recognized human rights.	◐	The company only tracks grievances submitted in writing, therefore the company is unable to monitor and track types of grievances, frequency, performance over time, etc. They did, however, conduct a survey of workers with respect to the functioning of the grievance mechanism and solicited feedback on how to improve.
1.4.4.3.	Stakeholders shall be provided with clearly communicated opportunities to submit feedback on the performance of the complaints and grievance mechanism.	◐	The company conducted a survey of workers with respect to the functioning of the grievance mechanism and solicited feedback on how to improve. This was the first such survey, and integration of concerns into policies / procedures is underway. It is important to note that, in this survey, 32 workers claimed to have used the grievance mechanism, however the company only had evidence of 4 grievances being

			submitted at the time of the survey (an additional 2 were submitted in the days before the on-site audit in February 2020). This is because the remaining 28 grievances were made before the implementation of a formal tracking system, and therefore were not recorded in any manner. The majority of the received was therefore relating to the prior, informal (in person or by phone only) grievance process. No similar survey or opportunity for feedback was given to communities.
1.4.5.1.	The operating company shall take reasonable steps to inform all stakeholders of the existence of the operational-level complaints and grievance mechanism, its scope, and its procedures.		The company has a formal grievance mechanism and the vast majority of workers are aware of it (from posters and suggestion boxes posted around the mine sites and main offices). The workers knew this was a way to make confidential / anonymous complaints, but most preferred to go straight to their supervisors with their issues. The company provided evidence of having presented the grievance mechanism to the workers at their inception training (photos, presentation, brochures, and attendance list) and a good percentage of workers recalled having received this training. Only one community has been notified of the existence of a formal grievance mechanism, and they recalled having had it explained to them recently. The company has plans to notify other communities in the near future (in some, they needed to wait because new local delegates - through whom they approach the communities - were being elected in February 2020), as laid out in their Stakeholder Engagement Plan, but they have not yet done so. Therefore although communities have access to the grievance mechanism, they are not aware of its existence and / or how to use it. Information concerning the grievance mechanism such as phone numbers, emails, submission boxes, are located at the mine site and not in communities.
1.4.5.2.	The operating company shall neither state nor imply that participation in an operational level grievance mechanism precludes the stakeholder from seeking redress through administrative, judicial or other non-judicial remedies.		While the company's grievance procedure does not include a waiver clause and says appeals are possible and that legal recourse always an option, this information was neither communicated to, or clearly understood by, the workers or communities.
1.4.5.3.	The operating company shall inform relevant personnel who interact with stakeholders of the proper procedures for handling stakeholder complaints and grievances, and ensure that personnel directly involved in the operational-level mechanism receive instruction on the respectful handling of all complaints and grievances, including those that may appear frivolous.		Grievance mechanism claims go through one individual (the Director) before being passed along to the head of the grievance mechanism. The Community Relations Coordinator confirmed that only people in the main offices dealing directly with the claims (i.e. the Director and the head of the grievance mechanism) were 'trained' on how to handle them, although the nature of this training was largely administrative (i.e. where to record grievances, how to respond) rather than how to interact with individuals submitting grievances in person. The site employees stated that most complaints went through informal channels (i.e. verbal complaints

			to supervisors) and that this was preferred by both the workers and the administrative staff. There was no training provided to supervisors on how to handle grievances, according to the head of the grievance mechanism.
1.4.6.1.	Periodically, the operating company shall report to stakeholders on grievances received and responses provided. This shall be done in a manner that protects the confidentiality and safety of those filing grievances.	⊗	

Chapter 1.5—Revenue and Payments Transparency			Basis for rating
1.5.1.1.	The operating company shall comply with 1.5.1.2 and 1.5.1.3, and/or demonstrate how it complies with equivalent reporting and disclosure requirements of the European Union Accounting Directive (2013/34/EU) and the European Union Transparency Directive (2013/50/EU), or an equivalent mandatory transparency regime.	—	This is not relevant because the site and site ownership is not associated with EU membership and Mexico does not have an equivalent mandatory transparency regime.
1.5.1.2.	On a yearly basis, the operating company shall publish a report that discloses all material payments made by itself and its corporate owner to the government of the country in which the mining project is located. The report shall be made public within 12 months after the end of each financial year.	⊗	
1.5.1.3.	The types of payment disclosed shall include as a minimum, as applicable: a. The host government's production entitlement; b. National state-owned enterprise production entitlement; c. Profits taxes; d. Royalties; e. Dividends; f. Bonuses, such as signature, discovery and production bonuses; g. License fees, rental fees, entry fees and other considerations for licenses and/or concessions; h. Payments for infrastructure improvements; and i. Any other significant payments and material benefits to government, including in kind payments.	⊗	
1.5.1.4.	At minimum, this information shall be broken down by recipient government body (where applicable), by project (where applicable), and by payment type.	⊗	
1.5.2.1.	The operating company shall demonstrate its compliance with the reporting requirements specified in Chapter 10 of the European Union Directive 2013/34/EU or an equivalent mandatory transparency regime, and/or shall	—	This is not relevant because the site and site ownership is not associated with EU membership and Mexico does not have an equivalent mandatory transparency regime.

	comply with the requirements listed under 1.5.2.2 below.	
1.5.2.2.	The operating company shall ensure that the following information at the mining project level is reported on an annual basis and is readily accessible to the public: a. Mine production, disaggregated by product type and volume; b. Revenues from sales, disaggregated by product type; c. Material payments and other material benefits to government as listed in paragraph 1.5.1.3, disaggregated according to the receiving government entity (e.g. national, regional, local entity; name of government department); d. Social expenditures, including the names and functions of beneficiaries; e. Taxes, tariffs or other relevant payments related to transportation of minerals; f. Payments to politicians' campaigns, political parties or related organizations; and g. Fines or other similar penalties that have been issued in relation to the project.	⊗
1.5.2.3.	The operating company shall publish annual accounts, following international accounting standards.	⊗
1.5.3.1.	If the mining project is located in a country without a mandated transparency regime, the operating company shall demonstrate support for the EITI by publishing a clear public statement endorsing the EITI Principles on its external website.	⊗
1.5.3.2.	If the mining project is located in a country without a mandated transparency regime and the EITI is active in that country, the operating company shall: a. Commit to engage constructively with and support implementation of the EITI consistent with the multi-stakeholder process adopted in its country of operation; and b. Provide links on its external website to completed and up-to-date Company Forms for its operation, if the EITI implementing country has completed at least one validation.	⊗
1.5.4.1.	The material terms for mineral exploration, development and production agreed between the operating company and government entities shall be freely and publicly accessible, with the exception of confidential business information, in the national language(s) of the country in which the mining project is located. a. Where these terms are negotiated, rather than governed by law, the company shall make the relevant agreements, licenses or contracts freely and publicly accessible. b. Where these terms are governed by law, free, public access to the relevant statutory documentation is deemed sufficient to meet the IRMA requirement.	⊗

1.5.4.2.	The beneficial ownership of the operating company shall be publicly accessible.	⊗	
1.5.5.1.	Critical The operating company shall develop, document and implement policies and procedures that prohibit bribery and other forms of corruption by employees and contractors.	◐	An anti-bribery/anti-corruption policy was reported to be in place; this policy is verbally communicated to employees and contractors but is not provided in writing.
1.5.5.2.	Procedures shall include: a. A requirement to internally report and record any undue pecuniary or other advantage given to, or received from, public officials or the employees of business partners, directly or through third parties; and b. Disciplinary actions to be taken if cases of bribery or corruption are discovered.	⊗	
1.5.5.3.	Relevant employees and contractors shall be trained in the application of the operating company's policy and procedures.	◐	Training on the policy was reported to be included in employee induction training. Written procedures are not in place and therefore have not been communicated in training.

Principle 2: Planning for Positive Legacies

RATING LEGEND Description of performance	
✓	Fully meets
◕	Substantially meets
◑	Partially meets
✗	Does not meet
—	Not relevant

Chapter 2.1—Environmental and Social Impact Assessment and Management			Basis for rating
2.1.1.1.	An Environmental and Social Impact Assessment (ESIA), appropriate to the nature and scale of the proposed mining project and commensurate with the level of its environmental and social risks and impacts, shall be completed prior to the commencement of any site-disturbing operations associated with the project.	—	IRMA recognizes that certain best practices may not have been widely used or expected at the time when existing mines should have carried out ESIA. As a result, existing mines have the option to mark this requirement as not relevant if there was no regulatory requirement to carry out an ESIA at the time they were developed.
2.1.1.2.	To enable a reasonable estimation of potential impacts related to the mining project, the ESIA process shall commence only after the project design has been sufficiently developed. Should the proposal be significantly revised a new assessment process shall be undertaken.	—	See justification for marking this as not relevant in 2.1.1.1.
2.1.1.3.	The ESIA shall be carried out in accordance with publicly available, documented procedures.	—	See justification for marking this as not relevant in 2.1.1.1.
2.1.2.1.	Prior to the implementation of the ESIA process the operating company shall ensure that there has been wide, public announcement of the project proposal and the associated ESIA process, and that reasonable and culturally appropriate efforts have been made to inform potentially affected and interested stakeholders in potentially affected communities about the proposed project.	—	See justification for marking this as not relevant in 2.1.1.1.
2.1.2.2.	Prior to the implementation of the ESIA process the operating company shall prepare a report and publish it on the operating company's external website, in the official national language(s) of the country in which the mining project is proposed to take place. The report shall provide: a. A general description of the proposed project, including details on the proposed location, and nature and duration of the project and related activities; b. The preliminary identification of potential significant environmental and social impacts,	—	See justification for marking this as not relevant in 2.1.1.1.

	and proposed actions to mitigate any negative impacts; c. A description of the main steps of the ESIA process that will be carried out, the estimated timeline and the range of opportunities for stakeholder participation in the process; and d. Contact details for the person or team responsible for management of the ESIA.		
2.1.3.1.	Critical The operating company shall carry out a scoping process to identify all potentially significant social and environmental impacts of the mining project to be assessed in the ESIA.	—	See justification for marking this as not relevant in 2.1.1.1.
2.1.3.2.	During scoping, the operating company shall identify stakeholders and rights holders (hereafter, collectively referred to as "stakeholders") who may be interested in and/or affected by the proposed project.	—	See justification for marking this as not relevant in 2.1.1.1.
2.1.3.3.	Scoping shall include the consideration of: a. Social impacts (including potential impacts on communities and workers) and environmental impacts (including potential impacts on wildlife, air, water, vegetation and soils) during all stages of the project lifecycle, from pre-construction through post-closure; b. Direct, indirect and cumulative impacts; and c. Potential impacts of extreme events.	—	See justification for marking this as not relevant in 2.1.1.1.
2.1.3.4	Scoping shall result in the identification of: a. Potentially significant environmental and social impacts of the proposed project; b. Alternative project designs to avoid significant adverse impacts; c. Other actions to mitigate identified adverse impacts; and d. Additional information and data needed to understand and assess the potential impacts.	—	See justification for marking this as not relevant in 2.1.1.1.
2.1.4.1.	Baseline data describing the prevailing environmental, social, economic and political environment shall be collected at an appropriate level of detail to allow the assessment of the potential impacts of the proposed mining project.	—	See justification for marking this as not relevant in 2.1.1.1.
2.1.4.2.	Additional studies shall be carried out as necessary to fulfill the information needs of the ESIA.	—	See justification for marking this as not relevant in 2.1.1.1.
2.1.5.1.	The operating company shall: a. Predict in greater detail the characteristics of the potentially significant environmental and social impacts identified during scoping; b. Determine the significance of the predicted impacts; c. Evaluate options to mitigate predicted significant adverse impacts in line with the mitigation hierarchy, prioritizing the avoidance of impacts through consideration of alternative project designs; and d. Determine the relative importance of residual impacts (i.e., impacts that cannot be mitigated) and whether significant residual adverse impacts can be addressed to the satisfaction of affected or relevant stakeholders.	—	See justification for marking this as not relevant in 2.1.1.1.

2.1.6.1.	The operating company shall prepare an ESIA report that includes, at minimum: a. A description of the proposed mining project; b. Detailed description of the direct, indirect and cumulative impacts likely to result from the project, and identification of significant adverse impacts; c. Description of the alternatives considered to avoid and mitigate significant adverse impacts in line with the mitigation hierarchy, and the recommended measures to avoid or mitigate those impacts; d. A review of the public consultation process, the views and concerns expressed by stakeholders and how the concerns were taken into account; and e. Names and affiliations of ESIA authors and others involved in technical studies.	—	See justification for marking this as not relevant in 2.1.1.1.
2.1.7.1.	The operating company shall develop and maintain a system to manage environmental and social risks and impacts throughout the life of the mine.	◐	The site has recently developed an Environmental Management System Manual (following ISO 14001 requirements) and a Social Management System Manual but they are still in very early stages of implementation. The main focus has been the compliance with monitoring and reporting and other legal requirements.
2.1.7.2.	An environmental and social management plan (or its equivalent) shall be developed that, at minimum: a. Outlines the specific mitigation actions that will be carried out to address significant environmental and social impacts identified during and subsequent to the ESIA process; b. Assigns personnel responsible for implementation of various elements of the plan; and c. Includes estimates for the resources needed to implement the plan.	◐	Environmental objectives have been defined for 2019. Different initiatives and projects to reduce environmental impacts implemented but there is no systematic approach for the implementation. No information available for other social aspects. Environmental and social management systems still in very early stages of development
2.1.7.3.	The environmental and social management plan shall be implemented and revised or updated as necessary based on monitoring results or other information.	◐	Only environmental objectives have been defined and no evidence of the specific description of the plans to achieve them. Documentation shall be periodically reviewed according to the manual but no evidence that the specific plans and programs are updated considering monitoring results or other information.
2.1.8.1.	As part of the ESMS, the operating company shall establish a program to monitor: a. The significant environmental and social impacts identified during or after the ESIA process; and b. The effectiveness of mitigation measures implemented to address environmental and social impacts.	◐	Several environmental monitoring in place including waste generation, water use, water monitoring data, energy consumption. The main focus has been to comply with legal reporting requirements. However, there is no systematic approach to analyze the data, trend analysis or evaluate effectiveness of the mitigation measures. In some cases, due to budgeting restrictions some of the monitoring campaigns have been delayed. No data available for social impacts
2.1.8.2.	The monitoring program shall be designed and carried out by competent professionals.	◔	From the review of documentation and interview with the staff evidence that competent professionals have been hired or

			contracted to perform monitoring programs were observed.
2.1.8.3.	If requested by relevant stakeholders, the operating company shall facilitate the independent monitoring of key impact indicators where this would not interfere with the safe operation of the project.	◐	The site is developing a more systematic process to manage stakeholders' requests, including facilitation of independent monitoring of indicators. The current process is still in very early stages of implementation.
2.1.9.1.	As part of the ESIA process, the operating company shall provide for timely and effective stakeholder and rights holder (hereafter collectively referred to as stakeholder) consultation, review and comment on: a. The issues and impacts to be considered in the proposed scope of the ESIA (see 2.1.3); b. Methodologies for the collection of environmental and social baseline data (see 2.1.4); c. The findings of environmental and social studies relevant to the conclusions and recommendations of the ESIA (see 2.1.5.1.a and b); d. Options and proposals to mitigate the potential impacts of the project (see 2.1.5.1.c); e. Provisional conclusions and recommendations of the ESIA, prior to finalization (see 2.1.6.1); and f. The final conclusions and recommendations of the ESIA (see 2.1.6.1).	—	See justification for marking this as not relevant in 2.1.1.1. No ESIA requirement was in place in Mexico at the time of start of the operations in 1974. However, in the Environmental Impact Declaration (MIA) for the tailings dam expansion project an environmental impact report was prepared including description of the proposed project, description of the environmental impacts and the mitigation measures. A notification in a newspaper of high circulation in the state was made for public communication of the intention of the project. The study was limited exclusively to environmental aspects. In Mexico SIA is not a requirement but it is a practice widely applied in mining. The site has recently started the formal stakeholder communication and participation program, but still in very early stages of development
2.1.9.2.	The operating company shall encourage and facilitate stakeholder participation, where possible, in the collection of data for the ESIA, and in the development of options to mitigate the potential impacts of the project during and subsequent to the ESIA process.	—	See justification for marking this as not relevant in 2.1.1.1. No ESIA requirement was in place in Mexico at the time of start of the operations in 1974. However, in the Environmental Impact Declaration (MIA) for the tailings dam expansion project an environmental impact report was prepared including description of the proposed project, description of the environmental impacts and the mitigation measures. A notification in a newspaper of high circulation in the state was made for public communication of the intention of the project. The study was limited exclusively to environmental aspects. In Mexico SIA is not a requirement but it is a practice widely applied in mining. The site has recently started the formal stakeholder communication and participation program, but still in very early stages of development
2.1.9.3.	The operating company shall provide for timely and effective stakeholder consultation, review and comment on the scope and design of the environmental and social monitoring program.	◐	No ESIA requirement in place in Mexico at the time of startup of the operations in 1974. The site has recently started a consultation program with the main Zimapán communities. Attendance lists maintained as evidence of the meetings. Topics included Human Rights policy, Water management, Emergency response and closing plans. No documented plan for stakeholder participation in the environmental or social monitoring programs was available for review. The consultation and participation processes are still in very early stages of development

2.1.9.4.	The operating company shall encourage and facilitate stakeholder participation, where possible, in the implementation of the environmental and social monitoring program.	◐	Attendance lists available for review as evidence that meetings with the community have been carried out in 2019. Topics included Human Rights policy, Water management, Emergency response and closing plans. No documented plan for stakeholder participation in the environmental or social monitoring programs was available for review. The consultation and participation processes are still in very early stages of development and implementation
2.1.9.5.	The operating company shall record all stakeholder comments received in relation to ESIA scoping; implementation; ESIA findings, conclusions and recommendations; and the environmental and social monitoring program. The company shall record how it responded to stakeholder comments.	—	See justification for marking this as not relevant in 2.1.1.1. Note: No ESIA requirement was in place in Mexico at the time of start of the operations in 1974, therefore no comments from stakeholders were received at that time. The site has recently started a communication program with communities. Attendance lists were available for review as evidence that meetings with the community have been carried out in 2019. Topics included Human Rights policy, Water management, Emergency response and closing plans. Even though comments from these meetings have been received there is no evidence of formal processes to manage them, track and evaluate effectiveness of actions. The process is still in very early stages of implementation.
2.1.10.1.	The ESIA report and any supporting data and analyses shall be made publicly available. Detailed assessments of some issues and impacts may be reported as stand-alone documents, but the ESIA report shall review and present the results of the full analysis in an integrated manner.	—	See justification for marking this as not relevant in 2.1.1.1.
2.1.10.2.	The operating company shall make publicly available an anonymized version of the ESIA record of stakeholder comments and its own responses, including how each comment was taken into account.	—	See justification for marking this as not relevant in 2.1.1.1.
2.1.10.3.	The environmental and social management plan shall be made available to stakeholders upon request.	◐	Even though plans to address some significant environmental aspects are in place to comply with regulatory requirements, and meetings with the main communities have been carried out recently, both the environmental and social management systems are still in very early stages of implementation.
2.1.10.4.	Summary reports of the findings of the environmental and social monitoring program shall be made publicly available at least annually, and all data and methodologies related to the monitoring program shall be publicly available.	◐	Meetings with communities have been carried out however no summary reports of the findings of the environmental and social monitoring programs have been publicly available at least annually. The site is in early stages of implementation of its external communication program
2.1.10.5.	The existence of publicly available ESIA and ESMS information, and the means of accessing it, shall be publicized by appropriate means.	◐	Meetings with communities have been carried out however no summary reports of the findings of the environmental and social monitoring programs have been publicly

			available at least annually. The site is in early stages of implementation of its external communication program

Chapter 2.2—Free, Prior and Informed Consent (FPIC)			Basis for rating
2.2.1.1.	The operating company shall have a publicly available policy that includes a statement of the company's respect for indigenous peoples' rights, as set out in the United Nations Declaration on the Rights of Indigenous Peoples.	◐	Human rights and ethics policies both make reference to respect for Indigenous peoples. However, neither is publicly available. Moreover, neither policy refers explicitly to Indigenous peoples' right to FPIC; rather, it treats indigenous people as any other stakeholder.
2.2.1.2.	The operating company shall ensure that indigenous peoples potentially affected by the company's mining-related activities are aware of the policy.	⊗	
2.2.2.1.	The operating company shall conduct due diligence to determine if the host government conducted an adequate consultation process aimed at obtaining indigenous peoples' informed consent prior to granting access to mineral resources. The key findings of due diligence assessments shall be made publicly available and shall include the company's justification for proceeding with a project if the State failed to fulfill its consultation and/or consent duties.	—	Existing mine, not relevant.
2.2.2.2.	Critical New mines shall not be certified by IRMA unless they have obtained the free, prior and informed consent (FPIC) of potentially affected indigenous peoples. The circumstances for obtaining FPIC include situations where mining-related activities may affect indigenous peoples' rights or interests, including those that may: impact on lands, territories and resources; require the physical relocation of people; cause disruption to traditional livelihoods; impact on critical cultural heritage; or involve the use of cultural heritage for commercial purposes.	—	Existing mine, not relevant.
2.2.2.3.	For new and existing mines, the operating company shall obtain FPIC from indigenous peoples for proposed changes to mining-related activities that may result in new or increased impacts on indigenous peoples' rights or interests.	—	There have been no changes / expansions to the mine since 2012 that would have new / additional implications for indigenous communities.
2.2.2.4.	If indigenous peoples' representatives clearly communicate, at any point during engagement with the operating company, that they do not wish to proceed with FPIC-related discussions, the company shall recognize that it does not have consent, and shall cease to pursue any proposed activities affecting the rights or interests of the indigenous peoples. The company may approach indigenous peoples to	—	Existing mine, not relevant.

	renew discussions only if agreed to by the indigenous peoples' representatives.		
2.2.3.1.	The operating company shall: a. Consult with indigenous peoples and others, and review other relevant date to identify indigenous peoples that own, occupy or otherwise use land, territories or resources that may be affected by the mining project; b. Disclose to indigenous peoples, in a culturally appropriate manner, the preliminary project concepts and/or proposed activities, and the indigenous peoples' right to FPIC.	◐	The company did undertake a process to identify indigenous peoples affected by the mine (by soliciting documents from government bodies, etc.) and in that way were able to determine whether and how FPIC needed to be implemented. However, they did not include in this assessment consultations with the more distant communities of Iglesia Vieja and Mesquite themselves, which self-identify as indigenous. However, as per IRMA, even in situations where FPIC is not required, mines nevertheless have to act in a manner which 'seeks to achieve the objectives' of this chapter. While the company provided ejidal temporary occupation contracts as evidence communities' approval of the mine's activities. However, as stated above, the company does not recognize the indigenous identity of these communities (which in any case are relevant because of their location downstream from the tailings dam), and therefore has not informed them of their unique rights as indigenous peoples (i.e. no formal consent has been signed with these communities) and the Company has not notified them that, should an expansion occur in the future, these communities would be entitled to FPIC. While there is a system in place (albeit a very recently established one) to allow for engagement with these communities that could potentially provide remediation and mitigation of past and current mine impacts, the characteristics of this system have neither been explained to or approved by the indigenous communities in their capacity as such.
2.2.3.2.	The operating company shall collaborate with indigenous peoples' representatives and other relevant members of affected communities of indigenous peoples to: a. Identify the appropriate means of engagement for each group of indigenous peoples (e.g., tribe, nation, population); b. Identify indigenous peoples' rights and interests that may be affected by the proposed activities; c. Identify additional studies or assessments needed to determine the range and degree of potential impacts on indigenous peoples' rights or interests; and d. Identify if there are capacity issues that may prevent full and informed participation of indigenous peoples. If issues are identified, the operating company shall provide funding or facilitate other means to enable indigenous peoples to address capacity issues in their preferred manner; and e. Ensure that the community as a whole/collective has meaningful opportunities to be involved in these processes.	⊗	

2.2.3.3.	The operating company shall collaborate with the indigenous peoples' representatives to design and implement plans to address the information gaps and needs identified through the scoping process.	—	Existing mine, not relevant.
2.2.4.1.	If there is more than one distinct indigenous peoples' group (e.g., tribe, nation, population) that may be affected by the operating company's mining-related activities, they may be included in a coordinated process or separate FPIC processes, as desired by the indigenous peoples.	—	Existing mine, not relevant.
2.2.4.2.	If the potentially affected indigenous peoples have an FPIC protocol in place or under development, the operating company shall abide by it unless changes are agreed to by the indigenous peoples' group(s). Otherwise, the operating company shall jointly develop and document, in a manner agreed to by indigenous peoples' representatives, the FPIC process or processes to be followed.	—	Existing mine, not relevant.
2.2.4.3.	The operating company shall make information on the mutually-agreed FPIC processes publicly available, unless the indigenous peoples' representatives have explicitly requested otherwise.	—	Existing mine, not relevant.
2.2.5.1.	The operating company shall document, in a manner agreed to by the indigenous peoples, the FPIC process that was followed.	—	Existing mine, not relevant.
2.2.5.2.	The operating company shall publicly report, in a manner agreed to by the indigenous peoples, on the FPIC process that was followed and its outcome.	—	Existing mine, not relevant.
2.2.5.3.	If the process results in consent being given by indigenous peoples to certain mining-related activities, an agreement outlining the terms and conditions shall be signed or otherwise validated by the operating company and the representative(s) of the indigenous peoples. The agreement shall be binding and shall be made publicly available unless the indigenous peoples' representatives explicitly request otherwise.	—	Existing mine, not relevant.
2.2.6.1	For new mines, IRMA certification is not possible if a mining project does not obtain free, prior and informed consent from indigenous peoples.	—	Existing mine, not relevant.
2.2.7.1.	The operating company shall collaborate with indigenous peoples to monitor implementation of the FPIC agreement, and document the status of the commitments made in the agreement.	—	The company did not specifically consult with communities that self-identify as indigenous concerning FPIC processes. There therefore is no FPIC agreement to monitor collaboratively.
2.2.7.2.	Engagement with indigenous peoples shall continue throughout all stages of the mining project.	◐	The company did not specifically consult with communities that self-identify as indigenous concerning FPIC processes, nor do they have an FPIC agreement in place. However, the two

			identified indigenous communities have been identified as stakeholder communities (albeit not indigenous ones) and they are included in the mine's stakeholder engagement plan, which outlines plans for ongoing engagement).
Chapter 2.3—Obtaining Community Support and Delivering Benefits			**Basis for rating**
2.3.1.1.	The operating company shall publicly commit to: a. Maintaining or improving the health, social and economic wellbeing of affected communities; and b. Developing a mining project only if it gains and maintains broad community support.	⊗	
2.3.2.1.	For new mines, the operating company shall demonstrate that it obtained broad community support from communities affected by the mining project, and that this support is being maintained.	—	Existing mine, not relevant.
2.3.2.2.	For new mines, broad community support shall be determined through local democratic processes or governance mechanisms, or by another process or method agreed to by the company and an affected community (e.g., a referendum). Evidence of broad community support shall be considered credible if the process or method used to demonstrate support: a. Occurred after the operating company carried out consultations with relevant stakeholders regarding potential impacts and benefits of the proposed mining project; b. Was transparent; c. Was free from coercion or manipulation; and d. Included the opportunity for meaningful input by all potentially affected community members, including women, vulnerable groups and marginalized members, prior to any decision or resolution.	—	Existing mine, not relevant.
2.3.2.3.	For existing mines, the operating company shall demonstrate that the mine has earned and is maintaining broad community support.	◐	Interviews with community stakeholders revealed that most communities believe that Carrizal is at least 'better than the other mines in the area'. Almost all communities complained of negative impacts of the mine, but all but one seemed to think that the company was doing a relatively good job of attempting to address them, or at least of communicating with the communities when and why they cannot. The 'support' for the mine manifested in ax expressed sense of futility in opposing it, given the communities' reliance on it as a source of income/labor. No community mentioned any protests or open opposition to the mine. The mine itself could not produce any evidence of wide-spread support, but they produced written contracts with several ejidal owners / leaders and plan on implementing perception studies in the communities in the future.

2.3.3.1.	The operating company, in collaboration with affected communities and other relevant stakeholders (including workers and local government), shall develop a participatory planning process to guide a company's contributions to community development initiatives and benefits in affected communities.	⊗	
2.3.3.2.	The planning process shall be designed to ensure local participation, social inclusion (including both women and men, vulnerable groups and traditionally marginalized community members, e.g., children, youth, the elderly, or their representatives), good governance and transparency.	⊗	
2.3.3.3.	If requested by the community and not provided by the appropriate public authorities, the operating company shall provide funding for mutually agreed upon experts to aid in the participatory process.	—	There have been no requests made for experts to guide the participatory process. The mine has stated that they would provide financing for an expert, should one be required for a future participatory process (although one does not yet exist).
2.3.3.4.	Efforts shall be made to develop: a. Local procurement opportunities; b. Initiatives that benefit a broad spectrum of the community (e.g., women, men, children, youth, vulnerable and traditionally marginalized groups); and c. Mechanisms that can be self-sustaining after mine closure (including the building of community capacity to oversee and sustain any projects or initiatives agreed upon through negotiations).	◐	The company has stated that they procure locally whenever possible, although admit that some larger / more specialized orders cannot come from local sources. They agreed to provide a list of procurements and sources, but ultimately did not deliver this document. Community benefits are largely provided through one-off / ad-hoc requests from community members, submitted in person or in writing via community delegates. The company has a requirement that whatever the request is for (typically materials for construction, or in kind goods to support celebrations), that it serve the interests of the community as a whole (as demonstrated by the approval of the delegate). In this way, they claim benefits reach all individuals. There is no sustainability or post-closure component to the benefits given, as they are almost entirely one-off or ad-hoc provision of in-kind goods (with the exception of a broader program being piloted in San Francisco. This program, however, is in its initial stages and not indicative of their broader approach to engagement. The company did not provide evidence that projects of this type would be scaled-up or expanded to other communities).
2.3.3.5.	The planning process and any outcomes or decisions shall be documented and made publicly available.	◐	The company did not have a planning process and there was no clear methodology as to how decisions were made concerning which direct community requests the company would support, and which it would not (beyond an informal/unwritten requirement that they be approved by the community delegate and be for the benefit of the community as a whole). The company did, however, provide a record of requests made and whether / when the company provided the materials requested. This information was not publicly available, however, and community stakeholders did not have a

			clear understanding of the decision-making process.
2.3.3.6.	In collaboration with the community, the operating company shall periodically monitor the effectiveness of any mechanisms or agreements developed to deliver community benefits, based on agreed upon indicators, and evaluate if changes need to be made to those mechanisms or agreements.	⊗	

Chapter 2.4—Resettlement		Basis for rating
Chapter Not Relevant	—	This chapter is not relevant because this is an existing mine, and no resettlement has occurred as a result of recent expansions.

Chapter 2.5—Emergency Preparedness and Response			Basis for rating
2.5.1.1.	Critical All operations related to the mining project shall have an emergency response plan conforming to the guidelines set forth in *United Nations Environment Programme, Awareness and Preparedness for Emergencies at the Local Level (APELL)* for Mining.	⊗	
2.5.1.2.	The operating company shall: a. Conduct an exercise to test the plan, with key participants describing how they would respond to a variety of different emergency scenarios, at least every 12 to 24 months; and b. Update the communications contacts of the emergency response plan at least annually.	◐	The organization has a drill program. 2019 only one out of four scenarios programmed was done. One drill was added due to specific requirements from local agency. Several scenarios including cyanide spill were not conducted. (UG fire with use or calculation for self-rescuers with current ventilation conditions).
2.5.2.1.	Critical The emergency response plan shall be developed in consultation with potentially affected communities and workers and/or workers' representatives, and the operating company shall incorporate their input into the emergency response plan, and include their participation in emergency response planning exercises.	⊗	
2.5.3.1.	All operations related to the mining project shall be covered by a public liability accident insurance policy that provides financial insurance for unplanned accidental events.	⊗	
2.5.3.2.	The public liability accident insurance shall cover unplanned accidental events such as flood damage, landslides, subsidence, mine waste facility failures, major spills of process solutions, leaking tanks, or others.	—	Insurance expired in August 2019.
2.5.3.3.	The accident insurance coverage shall remain in force for as long as the operating company, or any successor, has legal responsibility for the property.	—	Insurance expired in August 2019.

Chapter 2.6—Planning and Financing Reclamation and Closure			Basis for rating
2.6.1.1.	The operating company shall guarantee that the cost of implementing reclamation for exploration activities related to the mining development will be met by the company.	—	No evidence of guarantee that the cost of implementing reclamation for exploration activities related to the mining development will be met by the company. However, the company is not planning to have any exploration activities outside the current impacted areas.
2.6.1.2.	The operating company shall implement exploration-related reclamation in a timely manner.	—	No evidence of reclamation plan for exploration activities related to the mining development. The company is not planning to have any exploration activities outside the current impacted areas.
2.6.1.3.	Any stakeholder complaints of incomplete or inadequate exploration reclamation, if not resolved by other means, shall be discussed and resolved through the operational-level grievance mechanism (see IRMA Chapter 1.4).	—	No evidence of reclamation plan for exploration activities related to the mining development. The company is not planning to have any exploration activities outside the current impacted areas.
2.6.2.1.	Critical Prior to the commencement of mine construction activities the operating company shall prepare a reclamation and closure plan that is compatible with protection of human health and the environment, and demonstrates how affected areas will be returned to a stable landscape with an agreed post-mining end use.	◔	There is a recent (September 2019) Reclamation and Closure Plan, which has been developed following IRMA requirements. It looks very well structured and organize, however, not all the aspects that could require reclamation have been identified or considered for closure and post closure activities. Some examples include: water monitoring, WWTP construction, operation and decommissioning, and materials disposal. Gaps noted here are addressed as non-conformities below.
2.6.2.2.	At a minimum, the reclamation and closure plan shall contain: a. A general statement of purpose; b. Site location and background Information; c. A description of the entire facility, including individual site features; d. The role of the community in reviewing the reclamation and closure plan; e. Agreed-upon (after-ESIA) post-mining land use and facility use; f. Source and pathway characterization including geochemistry and hydrology to identify the potential discharge of pollutants during closure; g. Source mitigation program to prevent the degradation of water resources; h. Interim operations and maintenance, including process water management, water treatment, and mine site and waste site geotechnical stabilization; i. Plans for concurrent or progressive reclamation and revegetation, which should be employed wherever practicable; j. Earthwork: i. Stabilization and final topography of the reclaimed mine lands; ii. ii. Storm water runoff/run-on management;	◔	The current closure and reclamation plan is the first version and was developed following the IRMA requirements. Clear description of the objective, facility operations, community participation, area characterization, mitigation program, reclamation and revegetation is included. Extensive explanation on all restoration and remediation measures are included and several studies supporting the plan are part of the document. However some aspects were missing in the plan: a) chemicals use in the process description and pathway characterization (conceptual model of how contamination could be transported to receptors); b) Some recommendations from other studies (- Study of trace elements to know the direction of flow of underground currents; - Vertical electric sounding at level 1730 Concordia to detect the presence of aquiferous mantle during the works); c) Costs associated to water monitoring, WWTP operation and decommissioning and materials final disposal strategies (recycling,

	iii. Topsoil salvage to the maximum extent practicable; iv. Topsoil storage in a manner that preserves its capability to support plant regeneration; k. Revegetation/Ecological Restoration: i. Plant material selection, prioritizing native species as appropriate for the agreed post-mine land use; ii. Quantitative revegetation standards with clear measures to be implemented if these standards are not met within a specified time; iii. A defined period, no longer than 10 years, when planned revegetation tasks shall be completed; iv. Measures for control of noxious weeds; v. Planned activities to restore natural habitats (as well as biodiversity, ecosystem services and other conservation values as per Chapter 4.6); l. Hazardous materials disposal; m. Facility demolition and disposal, if not used for other purposes; n. Long-term maintenance; o. Post-closure monitoring plan; p. The role of the community in long-term monitoring and maintenance (if any); and q. A schedule for all activities indicated in the plan.		reuse, energy recovery, landfill, incineration, etc.) and cost or benefits associated; d) characteristics of the deposit and waste rock for the underground mine, so there is no source and pathway characterization for the underground mine; minerals include other possible contaminants of concern (e.g., antimony, arsenic)
2.6.2.3.	The reclamation and closure plan shall include a detailed determination of the estimated costs of reclamation and closure, and post-closure, based on the assumption that reclamation and closure will be completed by a third party, using costs associated with the reclamation and closure plan as implemented by a regulatory agency. These costs shall include, at minimum: a. Mobilization/demobilization; b. Engineering redesign, procurement, and construction management; c. Earthwork; d. Revegetation/Ecological Restoration; e. Disposal of hazardous materials; f. Facility demolition and disposal; g. Holding costs that would be incurred by the regulatory agency following a bankruptcy in the first two years before actual reclamation begins, including: i. Interim process water and site management; and ii. Short-term water treatment; h. Post-closure costs for: i. Long-term water treatment; and ii. Long-term monitoring and maintenance; i. Indirect Costs: i. Mobilization/demobilization; ii. Engineering redesign, procurement and construction management; iii. Contractor overhead and profit; iv. Agency administration; v. Contingency; and j. Either:	◔	Some budgeted aspects have not been considered, including: costs associated to implementation in recommendations from previous studies, such as study of trace elements to know the direction of flow of underground currents; and Vertical electric sounding at level 1730 Concordia to detect the presence of aquiferous mantle during the works. Costs associated to water monitoring, WWTP operation and decommissioning and materials final disposal strategies (recycling, reuse, energy recovery, landfill, incineration, etc.) and cost or benefits associated.

	i. A multi-year inflation increase in the financial surety; or ii. An annual review and update of the financial surety.		
2.6.2.4.	The operating company shall review and update the reclamation and closure plan and/or financial assurance when there is a significant change to the mine plan, but at least every 5 years, and at the request of stakeholders provide them with an interim reclamation progress report.	—	The reclamation and closure plan was recently developed and the financial insurance is still pending, so there has not yet been a need to carry out a review/revision.
2.6.2.5.	If not otherwise provided for through a regulatory process, prior to the commencement of the construction of the mine and prior to completing the final reclamation plan the operating company shall provide stakeholders with at least 60 days to comment on the reclamation plan. Additionally: a. If necessary, the operating company shall provide resources for capacity building and training to enable meaningful stakeholder engagement; and b. Prior to completing the final reclamation plan, the operating company shall provide affected communities and interested stakeholders with the opportunity to propose independent experts to provide input to the operating company on the design and implementation of the plan and on the adequacy of the completion of reclamation activities prior to release of part or all of the financial surety.	◔	The reclamation and closure plan was recently developed and the financial insurance is still pending, so there has not yet been a need to carry out a review/revision, and therefore, there is no progress report to share with stakeholders.
2.6.2.6.	Critical The most recent version of the reclamation and mine closure plan, including the results of all reclamation and closure plan updates, shall be publicly available or available to stakeholders upon request.	◔	Meetings with some communities to inform them about the Reclamation and Closure Plan have been carried out during 2020 and there is evidence that a copy of the plan was given to community representatives. However, a formal process to make the plan available to stakeholders has not been developed.
2.6.3.1.	Open pits shall be partially or completely backfilled if: a. A pit lake is predicted to exceed the water quality criteria in IRMA Chapter 4.2; and b. The company and key stakeholders have agreed that backfilling would have socioeconomic and environmental benefits; and c. It is economically viable.	—	No open pit
2.6.3.2.	Underground mines shall be backfilled if: a. Subsidence is predicted on lands not owned by the mining company; and b. If the mining method allows.	◔	The current Closure plan does not include evaluation of the backfilling option. However from interviews with mine staff backfilling was mentioned as an option for closure, including tailings.
2.6.4.1.	Critical Financial surety instruments shall be in place for mine closure and post-closure.	⊗	
2.6.4.2.	Financial surety instruments shall be: a. Independently guaranteed, reliable, and readily liquid; b. Reviewed by third-party analysts, using accepted accounting methods, at least every five years or when there is a significant change to the mine plan; c. In place before ground disturbance begins; and	⊗	

	d. Sufficient to cover the reclamation and closure expenses for the period until the next financial surety review is completed.		
2.6.4.3.	Self-bonding or corporate guarantees shall not be used.	—	Self-bonding or corporate guarantees are not used as financial surety instruments for the closure plan.
2.6.4.4.	The results of all approved financial surety reviews, with the exception of confidential business information, shall be made available to stakeholders upon request.	—	A financial surety has not yet been in place for five years, so no review required at this time.
2.6.4.5.	Prior to the commencement of the construction of the mine, prior to any renewal of the financial surety, and prior to final release of the financial surety the operating company shall provide the public with at least 60 days to comment on the adequacy of the financial surety. Additionally: a. Where the company deems certain financial surety information to be confidential business information it shall make the data available to the IRMA auditor and satisfy the auditor that the grounds for confidentiality are reasonable. If certain information is not included for confidential reasons, the fact that the information has been withheld shall be disclosed along with the financial surety. b. If necessary, the operating company shall provide resources for capacity building and training to enable meaningful stakeholder engagement; and c. Prior to the beginning of closure reclamation activities the operating company shall provide affected communities and interested stakeholders with the opportunity to propose independent experts to review the financial surety.	⊗	
2.6.4.6.	The terms of the financial surety shall guarantee that the surety is not released until: a. Revegetation/ecological restoration and reclamation of mine and waste sites and have been shown to be effective and stable; and b. Public comment has been taken before partial or final surety release.	⊗	
2.6.5.1.	Monitoring of closed mine facilities for geotechnical stability and routine maintenance is required in post-closure. The reclamation and closure plan shall include specifications for the post-closure monitoring and maintenance of all mine facilities, including, but not limited to: a. Inspection of surface (open pits) and underground mine workings; b. Inspection and maintenance of mine waste facilities including effectiveness of cover and any seepage capture systems; and c. Mechanisms for contingency and response planning and implementation.	◔	Reclamation plan includes a monitoring, control and maintenance for the closure, including contingency plan and response. However costs associated with these activities have not been considered.
2.6.5.2.	Monitoring locations for surface and groundwater shall be sufficient to detect off-site contamination from all closed mine facilities, as well as at the points of compliance.	◔	Currently the site has a monitoring plan for operations (based on regulatory requirements). It is assumed that the same monitoring plan will be applicable for the closure. No water monitoring plan for closure has been developed yet. In addition some recommended studies to understand better the ground water flow direction; the results

			could imply changes in the monitoring plan (current and for closure) . Cost associated to the monitoring plan not included in the plan.
2.6.5.3.	Water quality monitoring locations shall be sampled until IRMA Water Quality Criteria have been met for at least 5 years, with a minimum of 25 years of post-closure data. The 25-year minimum may be waived if ongoing water quality monitoring demonstrates and modeling predicts that no contamination of surface or ground waters is occurring or will occur, respectively.	◔	The plan includes the IRMA requirement to monitor for at minimum 25 years. However the site needs to review the monitoring plan for closure and post-closure phases to ensure sufficient monitoring locations to have a representative sampling
2.6.5.4.	Biologic monitoring shall be included in post-closure monitoring if required to ensure there is no ongoing post-closure damage to aquatic and terrestrial resources.	◔	Biodiversity monitoring program is focused on land flora and fauna but not in aquatic life. Until now there is no data regarding aquatic life and potential impacts of mine operations
2.6.5.5.	If a pit lake is present, pit lake water quality shall be monitored, and if potentially harmful to people, wildlife, livestock, birds, or agricultural uses, adequate measures shall be taken to protect these organisms.	—	No pit lake present
2.6.6.1.	Long-term water treatment shall not take place unless: a. All practicable efforts to implement best practice water and waste management methods to avoid long-term treatment have been made; and b. The operating company funds an engineering and risk assessment that: i. Is carried out by an independent third-party: ii. Evaluates the environmental and financial advantages/disadvantages and risks of long-term water treatment versus other mitigation methods; iii. Incorporates data on the failure rates of the proposed mitigation measures and water treatment mechanisms; iv. Determines that the contaminated water to be treated perpetually poses no significant risk to human health or to the livelihoods of communities if the discharge were to go untreated; and v. Includes consultations with stakeholders and their technical representatives during the design of the study, and discussion of findings with affected communities prior to mine construction or expansion.	—	According to IRMA, this requirement can be marked as not relevant for existing mines, unless an expansion is proposed that will lead to a requirement for long-term water treatment.
2.6.6.2	If a decision is made to proceed with long-term water treatment, the operating company shall take all practicable efforts to minimize the volume of water to be treated.	◔	The WWTP project for the tailings dam includes an oxidation pre-treatment to make metal removal easier through a specialized filtration system for heavy metals. This project also includes a system for the treatment of waste sludge to avoid contamination to the environment. Finally, they also include measuring equipment for water monitoring to guarantee the quality of effluent treatment. According to the expectations the water treatment will be carried out in the short term. However, the technology to drain the tailing is very innovative and there is a level of

			uncertainty regarding the timing to recover and complete the treatment of the tailing water and the tailings behaviors after the application of the technology, so there is the possibility that water treatment may be necessary after mine closure.
2.6.7.1.	The operating company shall provide sufficient financial surety for all long-term activities, including: mine closure and post-closure site monitoring, maintenance, and water treatment operations. Financial assurance shall guarantee that funds will be available, irrespective of the operating company's finances at the time of mine closure or bankruptcy.	⊗	
2.6.7.2.	If long-term water treatment is required post-closure: a. The water treatment cost component of the post-closure financial surety shall be calculated conservatively, and cost calculations based on treatment technology proven to be effective under similar climatic conditions and at a similar scale as the proposed operation; and b. When mine construction commences, or whenever the commitment for long-term water treatment is initiated, sufficient funding shall be established in full for long-term water treatment and for conducting post-closure monitoring and maintenance for as long as IRMA Water Quality Criteria are predicted to be exceeded.	◔	The WWTP project for the tailings dam water includes an oxidation pre-treatment to make metal removal easier using a specialized filtration system for heavy metals. This project also includes a system for the treatment of waste sludge to avoid contamination to the environment. Finally, they also include measuring equipment to monitor water to guarantee the quality of the effluent treatment. However not all the cost associated to the commissioning, operation, monitoring and decommissioning of the plant have been included in the post closure plan
2.6.7.3.	The post-closure financial surety shall be recalculated and reviewed by an independent analyst at the same time as the reclamation financial surety.	⊗	
2.6.7.4.	Long-term Net Present Value (NPV) calculations utilized to estimate the value of any financial surety shall use conservative assumptions, including: a. A real interest rate of 3% or less; unless the entity holding the financial surety can document that a higher long-term real interest rate can be achieved; and b. NPV calculation will be carried out until the difference in the NPV between the last two years in the calculations is US $10.00 or less (or its equivalent in other currencies).	⊗	

Principle 3: Social Responsibility

RATING LEGEND
Description of performance

⊘	Fully meets
◕	Substantially meets
◐	Partially meets
⊗	Does not meet
—	Not relevant

Chapter 3.1—Fair Labor and Terms of Work			Basis for rating
3.1.1.1.	The operating company shall adopt and implement human resources policies and procedures applicable to the mining project that set out its approach to managing workers in a manner that is consistent with the requirements of this chapter and national (i.e., host country) law.	◕	The company has a human capital policy that consists of recognition of human rights and various components relating to recruitment, payroll, vacations, disability, reassignment and other contract / legal matters. These policies are implemented, with the exception of freedom of association (see below).
3.1.2.1.	Critical The operating company shall respect the rights of workers to freedom of association and collective bargaining.	⊗	
3.1.2.2.	Where national law substantially restricts workers' organizations, the operating company shall not restrict workers from developing alternative mechanisms to express their grievances and protect their rights regarding working conditions and terms of employment. The operating company shall not seek to influence or control these mechanisms.	—	Not relevant because Mexico does not prohibit workers' organizations.
3.1.2.3.	The operating company shall engage with workers' representatives and workers' organizations and provide them with information needed for meaningful negotiation in a timely manner.	—	Not relevant because there is no active workers' organization.
3.1.2.4.	Workers' representatives shall have access to facilities needed to carry out their functions in the workplace. This includes access to designated non-work areas during organizing efforts for the purposes of communicating with workers, as well as accommodations for workers' representatives at fly-in/fly-out or other remotely located mine sites, where relevant.	—	Not relevant because there is no active workers' organization.
3.1.2.5.	The operating company shall remain neutral in any legitimate unionizing or worker-organizing effort; shall not produce or distribute material meant to disparage legitimate trade unions; shall not establish or support a company union for the purpose of undermining legitimate worker representation; and shall not impose sanctions on workers' organizations participating in a legal strike.	⊗	
3.1.2.6.	Upon employment, the operating company shall:	⊗	

	a. Inform workers of their rights under national labor and employment law; b. Inform workers that they are free to join a workers' organization of their choosing without any negative consequences or retaliation from the operating company; c. If relevant, inform workers of their rights under any applicable collective agreement; and d. If relevant, provide workers with a copy of the collective bargaining agreement and the contact information for the appropriate trade union (or workers' organization) representative.		
3.1.2.7.	The operating company shall not discriminate or retaliate against workers who participate, or seek to participate, in legitimate workers' organizations or in a legal strike.	⊗	
3.1.2.8.	Where the operating company is a party to a collective bargaining agreement with a workers' organization, the terms of the agreement shall be respected. Where such an agreement does not exist, or an agreement does not address specific requirements in this chapter, the operating company shall meet the relevant IRMA requirements.	—	Not relevant because no collective bargaining agreement in place (or no evidence that one exists).
3.1.2.9.	The operating company shall not make use of short-term contracts or other measures to undermine a collective bargaining agreement or worker organizing effort, or to avoid or reduce obligations to workers under applicable labor and social security laws and regulations.	⊗	
3.1.2.10.	The operating company shall not hire replacement workers in order to prevent, undermine or break up a legal strike, support a lockout, or avoid negotiating in good faith. The company may, however, hire replacement workers to ensure that critical maintenance, health and safety, and environmental control measures are maintained during a legal strike.	—	This is not relevant because there has not been any strike or lockout at the mine.
3.1.3.1.	The operating company shall base employment relationships on the principles of equal opportunity and fair treatment, and shall not discriminate or make employment decisions on the basis of personal characteristics unrelated to inherent job requirements.	✓	Policies outlined non-discrimination procedures, and interviews with workers (including female workers) revealed that they did not feel discriminated against for any personal characteristic, including gender. Payroll assessments also revealed fairly transparent pay practices.
3.1.3.2	Exceptions to 3.1.3.1 may be made with respect to hiring and recruitment in the case of: a. Targets or quotas mandated by law; b. Targets developed through local agreements for the employment of local residents, indigenous peoples, or individuals who have been historically disadvantaged; or c. Operating company targets for the employment of local residents, indigenous peoples, or individuals who have been historically disadvantaged that are expressed in publicly accessible policies with explicit goals and justification for such targets.	◐	The company claims to hire 95% locally, and although it is not an explicit commitment, it is a verbal understanding with communities and something that they share openly in their PPTs as a point of pride. However, there is no publicly available justification / explanation for these hiring practices.

3.1.3.3.	Critical The operating company shall take measures to prevent and address harassment, intimidation, and/or exploitation, especially in regard to female workers.	◔	The mine has in place policies to avoid harassment, and none of the male workers reported harassment or exploitation from other workers or supervisors. Furthermore, they reporting understanding that any type of harassment would be met with punitive measures. A few workers expressed that supervisors will give them undesirable jobs if they complain too much, even if their complaints are valid. However, for the most part the workers expressed satisfaction with their relationships with their superiors. Sexual harassment of women was not reported as an issue, based on interviews with female mine workers and also male colleagues concerning whether women are mistreated. One female worker did complain of verbal comments made about her appearance (i.e. "catcalls") but she did not report this to mine staff.
3.1.4.1.	Prior to implementing any collective dismissals, the operating company shall carry out an analysis of alternatives to retrenchment. If the analysis does not identify viable alternatives to retrenchment, a retrenchment plan shall be developed in consultation with workers, their organizations, and, where appropriate, the government. The plan shall be based on the principle of non-discrimination, and be implemented to reduce the adverse impacts of retrenchment on workers.	—	Both mine staff and workers alike confirmed there has never been a mass-firing / period of retrenchment.
3.1.4.2.	The operating company shall ensure that all workers receive notice of dismissal and severance payments mandated by law and collective agreements in a timely manner. All outstanding back pay, social security benefits, and pension contributions and benefits shall be paid on or before termination of the working relationship, or in accordance with a timeline agreed through a collective agreement. Payments shall be made directly to workers, or to appropriate institutions for the benefit of workers. Where payments are made for the benefit of workers, they shall be provided with evidence of such payments.	—	Both mine staff and workers alike confirmed there has never been a mass-firing / period of retrenchment.
3.1.5.1.	Critical The operating company shall provide a grievance mechanism for workers (and their organizations, where they exist) to raise workplace concerns. The mechanism, at minimum: a. Shall involve an appropriate level of management and address concerns promptly, using an understandable and transparent process that provides timely feedback to those concerned, without any retribution; b. Shall allow for anonymous complaints to be raised and addressed; c. Shall allow workers' representatives to be present, if requested by the aggrieved worker; and d. Shall not impede access to other judicial or administrative remedies that might be available under the law or through existing arbitration procedures, or substitute for grievance mechanisms provided through collective agreements.	◔	There is grievance mechanism information posted around the mine sites and main offices, and boxes to submit grievances anonymously in writing are located in areas out of the sight of surveillance cameras to protect confidentiality. The company provided evidence of having presented the grievance mechanism to the workers at their inception training (photos, presentation, brochures, and attendance list) and a good percentage of workers recalled having received this training. Although their policy states that use of the grievance mechanism does not preclude legal recourse, this was not included in their induction materials and was not a familiar concept to the workers.

3.1.5.2.	The operating company shall inform the workers of the grievance mechanism at the time of recruitment and make it easily accessible to them.	◔	The company provided evidence of having presented the grievance mechanism to the workers at their inception training (photos, presentation, brochures, and attendance list) and the majority of interviewed workers recalled having received this training. One or two individuals claimed to have left a voice mail on the anonymous number and never received a return call. Although their policy states that use of the grievance mechanism does not preclude legal recourse, this was not included in their induction materials and was not a familiar concept to the workers. Workers for the most part knew of a grievance mechanism (email, phone number, buzones) but almost exclusively brought complaints to their supervisors directly. They stated for the most part comfortable going right to their supervisors, or directly to the office (but not via the formal grievance mechanism).
3.1.5.3.	The operating company shall maintain a record of grievances and the company's actions taken to respond to and/or resolve the issues.	◔	The company provided evidence of having presented the grievance mechanism to the workers at their inception training (photos, presentation, brochures, and attendance list) and the majority of interviewed workers recalled having received this training. One or two individuals claimed to have left a voice mail on the anonymous number and never received a return call. Although their policy states that use of the grievance mechanism does not preclude legal recourse, this was not included in their induction materials and was not a familiar concept to the workers. Workers for the most part knew of a grievance mechanism (email, phone number, buzones) but almost exclusively brought complaints to their supervisors directly. They stated for the most part comfortable going right to their supervisors, or directly to the office (but not via the formal grievance mechanism).
3.1.6.1.	The operating company shall have documented disciplinary procedures (or their equivalent) that are made available to all workers.	✓	The company has a clear disciplinary actions approach, with sanctions ranging from warnings to loss of pay to loss of job. Almost all workers were aware of these policies / procedures and agreed these were properly implemented.
3.1.6.2.	The operating company shall not use corporal punishment, harsh or degrading treatment, sexual or physical harassment, mental, physical or verbal abuse, coercion or intimidation of workers during disciplinary actions.	✓	The company has a clear disciplinary actions approach, with sanctions ranging from warnings to loss of pay to loss of job. Almost all workers were aware of these policies / procedures and agreed these were properly implemented. Informally, however, approximately 3 workers stated that it was possible to be assigned undesirable (yet valid) jobs for complaining too much to supervisors. This view was not widely shared, however, and nobody offered specifics.
3.1.6.3.	The operating company shall keep records of all disciplinary actions taken.	✓	The company tracks, and reports on (internally) all disciplinary actions taken.

3.1.7.1.	The operating company shall document the ages of all workers.	✓	The company has a sheet with all the ages documented; photos of IDs in each person's file, including contractors. This applies for permanent / long term as well as temporary worker as well (verified with short-term worker file).
3.1.7.2.	Critical Children (i.e., persons under the age of 18) shall not be hired to do hazardous work (e.g., working underground, or where there is exposure to hazardous substances).	✓	The mine is adamant about not hiring anyone under the age of 18 for any form of job, and this was unanimously confirmed by workers and community members alike. The mine confirms the ages of all workers / contractors by requesting and photocopying their voting eligibility card (issued at the age of 18) and keeping it on file (the audit team verified this process for both long-term and short-term workers).
3.1.7.3.	Critical The minimum age for non-hazardous work shall be 15, or the minimum age outlined in national law, whichever is higher.	✓	The mine is adamant about not hiring anyone under the age of 18 for any form of job, and this was unanimously confirmed by workers and community members alike. The mine confirms the ages of all workers / contractors by requesting and photocopying their voting eligibility card (issued at the age of 18) and keeping it on file (the audit team verified this process for both long-term and short-term workers).
3.1.7.4.	When a child is legally performing non-hazardous work, the company shall assess and minimize the risks to their physical or mental health, and ensure that regular monitoring of the child's health, working conditions and hours of work occurs by the national labor authority, or if that is not possible, by the company itself.	—	Not relevant because there have not been any cases of children performing non-hazardous work at the mine.
3.1.7.5.	If the operating company discovers that a child under the minimum age outlined in 3.1.7.2 and 3.1.7.3 is performing hazardous or non-hazardous work: a. The child shall be removed immediately from his or her job; and b. Remediation procedures shall be developed and implemented that provide the child with support in his or her transition to legal work or schooling, and that take into consideration the welfare of the child and the financial situation of the child's family.	—	Not relevant because there have not been any cases of children performing hazardous or non-hazardous work at the mine.
3.1.7.6.	Where there is a high risk of child labor in the mine's supply chain, the operating company shall develop and implement procedures to monitor its suppliers to determine if children below the minimum age for hazardous or non-hazardous work are being employed. If any cases are identified, the operating company shall ensure that appropriate steps are taken to remedy them. Where remedy is not possible, the operating company shall shift the project's supply chain over time to suppliers that can demonstrate that they are complying with this chapter.	✗	

3.1.8.1.	Critical The operating company shall not employ forced labor or participate in the trafficking of persons.		Company policy explicitly states this and workers and communities unanimously agree. Mining jobs of any type are highly desired in the community, and no stakeholder interviewed expressed any concerns about this as an issue. Workers were all paid a legal wage and leaving their jobs was voluntary.
3.1.8.2.	Where there is a high risk of forced or trafficked labor in the mine's supply chain, the operating company shall develop and implement procedures to monitor it suppliers to determine if forced labor or trafficked workers are being employed. If any cases are identified, the operating company shall ensure that appropriate steps are taken to remedy them. Where remedy is not possible, the operating company shall shift the project's supply chain over time to suppliers that can demonstrate that they are complying with this chapter.		The company has not done a human rights risk assessment with respect to its supply chain. They have, however, gone to lengths to ensure that contractors do not use forced labour; but they have not expanded this assessment to their supply chain. Absent a means to definitively determine whether or not a risk exists, one must proceed with the assumption that it does. Therefore, this criteria to investigate and mitigate has only been partially met,
3.1.9.1.	The operating company shall pay wages to workers that meet or exceed the higher of applicable legal minimum wages, wages agreed through collective wage agreements, or a living wage.		The companies pay policies and practices fall within the legally permissible limits under Mexican law. No workers stated that their wages were illegal, although some mentioned them being insufficient to meet their needs. It was not possible to ascertain the relationship between the CBA and the amount the workers were paid, however, as this document was not provided to the audit team and workers were unfamiliar with its content.
3.1.9.2.	Overtime hours shall be paid at a rate defined in a collective bargaining agreement or national law, and if neither exists, at a rate above the regular hourly wage.		The company's overtime pay policies and practices fall within the legally permissible limits under Mexican law (double pay for overtime worked). No workers stated differently, although a few expressed that they only received overtime pay for full shifts worked, not for staying slightly after the end of their shift. It was unclear whether this practice was common. It was not possible to ascertain the relationship between the CBA and the amount the workers were paid for overtime, however, as the CBA was not provided to the audit team and workers were unfamiliar with its content.
3.1.9.3.	All workers shall be provided with written and understandable information about wages (overtime rates, benefits, deductions and bonuses) before they enter employment, and for the pay period each time they are paid.		The company provides workers with written and understandable information about wages (overtime rates, benefits, deductions and bonuses) before they enter employment; and they provide pay slips to workers for each pay period. However, several workers expressed a lack of transparency surrounding production bonuses.
3.1.9.4.	The operating company shall pay wages in a manner that is reasonable for workers (e.g., bank transfer, cash or check).		Workers did not report any issues or inconveniences with the way in which they were paid.
3.1.9.5.	The operating company shall ensure that deductions from wages are not made for disciplinary purposes unless one of the following conditions exist:		Some workers claimed that Carrizal made deductions from their pay for injuries on the job and for machinery broken on the job; however, no worker provided a specific incident or timeframe during which this

	a. Deductions from wages for disciplinary purposes are permitted by national law, and the law guarantees the procedural fairness of the disciplinary action; or b. Deductions from wages for disciplinary purposes are permitted in a freely negotiated collective bargaining agreement or arbitration award.		occurred to facilitate forensic accounting. Whether this is allowable under the CBA is not possible to ascertain as Carrizal did not provide this document.
3.1.10.1.	The operating company shall ensure that: a. Regular working hours do not exceed eight hours per day, or 48 per week. Where workers are employed in shifts the 8-hour day and 48-hour week may be exceeded, provided that the average number of regular hours worked over a 3-week period does not exceed 8 hours per day and 48 hours per week; b. Workers are provided with at least 24 consecutive hours off in every 7-day period; and c. Overtime is consensual, and limited to 12 hours a week. d. Exceptions to 3.1.10.1.b and c shall be allowed at mines in remote locations if: i. A freely negotiated collective bargaining agreement is in force that allows variances to the rest and/or overtime hours above; and ii. Through consultations with workers' representatives, a risk management process that includes a risk assessment for extended working hours is established to minimize the impact of longer working hours on the health, safety and welfare of workers.	✓	Company policies state workers can work a maximum of 48 hours a week, with 8 hours maximum of overtime. Workers confirmed that they can pick up extra shifts (one a week) if they choose to (overtime is consensual); workers sometimes choose not to take their day off, but they are provided with it (one day a week). There are also limits on how many weeks in a row they can opt out of taking their day off, and shifts are adjusted to ensure that, when they have chosen to work overtime, they still get a rest period (i.e. if they work two subsequent shifts they will have two shifts off before returning to their normal work schedule).
3.1.10.2.	Where neither national law nor a collective bargaining agreement includes provisions for worker leave, the operating company shall, at minimum, provide: a. An annual paid holiday of at least three working weeks per year, after achieving one year of service; and b. A maternity leave period of no less than 14 weeks.	—	National law stipulates leave allowances, and the company complies.

Chapter 3.2—Occupational Health and Safety			Basis for rating
3.2.1.1.	The operating company shall implement a health and safety management system for measuring and improving the mining project's health and safety performance.	◐	The organization is implementing a OH&S MS. (Occupational Health and Safety Management System). Early stages of implementation and with multiple failures potentially due to its recent implementation and constant changes. Focus in performance (measured thru lagging indicators) is not helping to advance in areas that will provide risk reduction. New OH&S management will gradually introduce those changes.
3.2.2.1.	The operating company shall implement an ongoing, systematic health and safety risk assessment process that follows a recognized risk assessment methodology for industrial operations.	◐	The site is in early stages of implementing the management system. There is a risk assessment methodology and is properly documented. Hazard identification is activity based, increasing the risk of missing some hazards. Also risk assessment methodology is of recent implementation and probability exposure seems too complex and not always

			used to implement effective operational controls.
3.2.2.2.	The assessment process shall identify and assess the significance/consequence of the full range of potential hazards associated with the mining project, including those related to: a. The design, construction and operation of the workplace, mining-related activities and processes, the physical stability of working areas, the organization of work, use of equipment and machinery, and waste and chemical management; b. All personnel, contractors, business partners, suppliers and visitors; c. Unwanted events; d. Routine and non-routine activities, products, procedures, and services; and e. Changes in duration, personnel, organization, processes, facilities, equipment, procedures, laws, standards, materials, products systems and services.	⊗	
3.2.2.3.	The operating company shall pay particular attention to identifying and assessing hazards to workers who may be especially susceptible or vulnerable to particular hazards.	◔	There is an organizational focus in trying to ensure that special people fit into the organization and that specially women are recognized within the organization. People with special requirements are listen and taking in consideration in the allocation of work spaces.
3.2.2.4.	The operating company shall develop, implement and systematically update a risk management plan that prioritizes measures to eliminate significant hazards, and outlines additional controls to effectively minimize negative consequences and protect workers and others from remaining hazards.	⊗	
3.2.2.5.	In particular, the operating company shall demonstrate that it has developed procedures and implemented measures to: a. Ensure that the mine has electrical, mechanical and other equipment, including a communication system, to provide conditions for safe operation and a healthy working environment; b. Ensure that the mine is commissioned, operated, maintained and decommissioned in such a way that workers can perform the work assigned to them without endangering their safety and health or that of other persons; c. Maintain the stability of the ground in areas to which persons have access in the context of their work; d. If relevant, whenever practicable provide two exits from every underground workplace, each connected to separate means of egress to the surface; e. If relevant, ensure adequate ventilation for all underground workings to which access is permitted; f. Ensure a safe system of work and the protection of workers in zones susceptible to particular hazards; g. Prevent, detect and combat accumulations of hazardous gases and dusts, and the start and spread of fires and explosions; and	⊗	

	h. Ensure that when there is potential high risk of harm to workers, operations are stopped and workers are evacuated to a safe location.		
3.2.3.1.	Workers shall be informed of their rights to: a. Report accidents, dangerous occurrences and hazards to the employer and to the competent authority; b. Request and obtain, where there is cause for concern on safety and health grounds, inspections and investigations to be conducted by the employer and the competent authority; c. Know and be informed of workplace hazards that may affect their safety or health; d. Obtain information relevant to their safety or health, held by the employer or the competent authority; e. Remove themselves from any location at the mine when circumstances arise that appear, with reasonable justification, to pose a serious danger to their safety or health; and f. Collectively select safety and health representatives.	◔	There is reporting of accidents, traceability and reliability of accidents is not complete. Near misses and dangerous occurrences are not consistently documented potentially due to the criteria created for reporting gaps with controls. Most of the personnel interviewed showed confidence in understanding the hazards around them. Understanding on expectation of controls to reduce risk was understood but not consistently linked to potential consequences of failure of those controls. In training sessions/refreshers, consequence thinking is currently being implemented (under early stages). Critical control implementation is in early stages of implementation, hence, verification of effectiveness and reporting is inconsistent.
3.2.3.2.	In all cases a worker attempting to exercise any of the rights referred to in 3.2.2.1 in good faith shall be protected from reprisals of any sort.	◔	Could not verify access to external experts from part of workers. There is communication regarding incident and accidents (at least to Dec. 2019). After this date some reports could not be accessed. Personnel were knowledgeable of main risks and inspections
3.2.3.3.	The operating company shall develop systems to effectively communicate with, and enable input from the workforce on matters relating to occupational health and safety.	◔	The organization has a process to communicate with workers thru various channels. The QA of the information is relative and not consistent addresses all relevant points such as key controls and modifications. Effectiveness of the communication may be impacted by the quality of the information and by the focus from operational management impacted by the type of objectives set for H&S.
3.2.3.4.	The operating company shall develop and implement a formal process involving workers' representatives and company management to ensure effective worker consultation and participation in matters relating to occupational health and safety including: a. Health and safety hazard identification and assessment; b. Design and implementation of workplace monitoring and worker health surveillance programs; c. Development of strategies to prevent or mitigate risks to workers through the health and safety risk assessments or workplace and workers' health surveillance; and d. Development of appropriate assistance and programs to support worker health and safety, including worker mental health.	◔	Mechanisms are present but during field observations it became clear that workers were implementing their own control strategies. Also, some of the risk assessments were not complete but new OH&S (Occupational Health and Safety) management is increasing worker participation in OH&S matters. There is a OH&S worker committee, but their effective engagement is limited by their perception what critical control is. This program is currently in early stages of development. Several of the programs are in early stages of implementation or not implemented. Other critical operational techniques are based on the experience and culture of the workers (very proficient) but with varying levels of risk acceptance. E.g. Scaling.
3.2.3.5.	The operating company shall provide workers' health and safety representatives with the opportunity to:	◔	Could not verify access to external experts from part of workers. There is communication regarding incident and accidents (at least to

	a. Participate in inspections and investigations conducted by the employer and by the competent authority at the workplace; b. Monitor and investigate safety and health matters; c. Have recourse to advisers and independent experts; and d. Receive timely notice of accidents and dangerous occurrences.		Dec. 2019). After this date some reports could not be accessed. Personnel were knowledgeable od main risks and inspections were being performed.
3.2.3.6.	Visitors and other third parties accessing the mining premises shall receive an occupational health and safety briefing, and be provided with relevant protective equipment for areas of the mine site that or associated facilities that they will be entering.		Visitors and other third parties receive induction. This induction was performed by the H&S supervision.
3.2.4.1.	Critical (a and b) The operating company shall implement measures to protect the safety and health of workers including: a. Informing workers, in a comprehensible manner, of the hazards associated with their work, the health risks involved and relevant preventive and protective measures; b. Providing and maintaining, at no cost to workers, suitable protective equipment and clothing where exposure to adverse conditions or adequate protection against risk of accident or injury to health cannot be ensured by other means; c. Providing workers who have suffered from an injury or illness at the workplace with first aid, and, if necessary, prompt transportation from the workplace and access to appropriate medical facilities; d. Providing, at no cost to workers, training/education and retraining programs and comprehensible instructions on safety and health matters as well as on the work assigned; e. Providing adequate supervision and control on each shift; and f. If relevant, establishing a system to identify and track at any time the probable locations of all persons who are underground.		
3.2.4.2.	If the risk assessment process reveals unique occupational health and safety risks for certain groups of workers (e.g., pregnant women, children, HIV-positive, etc.) the operating company shall ensure that additional protective measures are taken, and trainings and health promotion programs are available to support the health and safety of those workers.		The needs of special groups are accommodated in work environments. This includes female workers in the underground.
3.2.4.3.	The operating company shall provide workers with clean toilet, washing and locker facilities (commensurate with the number and gender of staff employed), potable drinking water, and where applicable, sanitary facilities for food storage and preparation. Any accommodations provided by the operating company shall be clean, safe, and meet the basic needs of the workers.		Above ground facilities were being improved, still deficiencies were noted in the presence of soap, toilet paper and adequate showers. In the UG there some practices that were not ensuring the needs of workers. E.g. Toilets and resting areas. There is no shelter in place in the UG. This is in the purchasing process.
3.2.4.4.	The operating company shall ensure that workers are provided with compensation for work-related injuries and illnesses as follows: a. In countries where workers' compensation is not provided through government schemes or a collective bargaining agreement:		Legal requirements in Mexico are well established regarding the workers compensation rights. Mexican law covers requirements in 3.2.4.4.a and there are specific compensation for worker death as a result of work-related

	i. The operating company shall compensate workers for work-related injuries or illnesses at a rate that, at minimum, covers medical expenses and wages during the recovery and rehabilitation period; ii. If a worker is not able to return to work due to the severity of the work-related injury or illness, the operating company shall compensate for lost earnings until the worker qualifies for an adequate pension (i.e., 2/3 or more of the salary they would otherwise normally receive if healthy and working); or iii. [flag] If an occupational illness manifests after a worker has retired, the operating company or its corporate owner shall, at minimum, compensate the worker for medical expenses, unless the operating company or its corporate owner can establish that the occupational illness was not connected to the worker's employment at the mining project. b. In countries that do not provide for worker rehabilitation as part of their workers' compensation schemes, the operating company shall ensure that workers have free or affordable access to rehabilitation programs to facilitate an expeditious return to work; and c. Where a worker dies as a result of a work-related injury or disease, the operating company shall, at minimum, provide to spouses and dependent children benefits to cover funeral expenses and transportation of the worker's body, if appropriate, as well as compensation that is equal to or greater than three months' salary of the deceased worker.		injury/diseased. Those are in some cases limited to a specific amounts and not to a number of salaries. From the incident and accident descriptions a cross check was performed with limited examples, but those verified had rights executed.
3.2.5.1.	The operating company and workers' representatives on a joint health and safety committee, or its equivalent, shall perform regular inspections of the working environment to identify the various hazards to which the workers may be exposed, and to evaluate the effectiveness of occupational health and safety controls and protective measures.	◐	Inspections are performed with workers representative, the effectiveness of such inspections are apparently low and/or actions to implement immediate mitigations actions are not consistently implemented.
3.2.5.2.	The operating company shall carry out workplace monitoring and worker health surveillance to measure exposures and evaluate the effectiveness of controls as follows: a. Workplace monitoring and worker health surveillance shall be designed and conducted by certified industrial hygienists or other competent professionals; b. Health surveillance shall be carried out in a manner that protects the right to confidentiality of medical information, and is not used in a manner prejudicial to workers' interests; c. Samples collected for workplace monitoring and health surveillance purposes shall be analyzed in an ISO/IEC 17025 certified or nationally accredited laboratory; d. Sample results shall be compared against national occupational exposure limits (OELs) and/or biological exposure indices (BEIs), if they exist, or OELs/BEIs developed by the American Conference of Governmental Industrial Hygienists (ACGIH); and	◐	The organization has recently hired a medical professional to create its own health department including sampling facilities. Medical surveillance programs are mainly triggered by the legal requirement and not consistently linked to the risk.

	e. If an OEL/BEI is exceeded, the affected worker(s) shall be informed immediately, and controls shall be reviewed and revised in a timely manner to ensure that future exposure levels remain within safe limits.		
3.2.5.3.	Controls, protective measures, health risk assessments, risk management plans, and training and educational materials shall be updated as necessary based on inspection and monitoring results.	⊗	
3.2.5.4.	The operating company shall ensure that all workplace injuries, fatalities, accidents and dangerous occurrences, as defined by national laws or regulations, are documented, reported to the competent authority, investigated and that appropriate remedial action is taken.	◐	There is a record on accident and corrective actions. Such record finishes on June 2019 and there were no further records seen. There are no documented records of near misses, trend analysis and root causes.
3.2.6.1.	The operating company shall maintain accurate records of health and safety risk assessments; workplace monitoring and workers' health surveillance results; and data related to occupational injuries, diseases, accidents, fatalities and dangerous occurrences collected by the company and submitted to competent authorities. This information, except for data protected for medical confidentiality reasons, shall be available to workers' health and safety representatives.	◐	Records are not consistently reliable as errors were detected in measurements of noise and ventilation. QA verification of data generated and recorded by third parties may not be consistent. Safety data sheets for several chemical and specification were not available during the assessment.
3.2.6.2.	The operating company shall establish a data management system that enables worker health data to be readily located and retrieved, and data protected by medical confidentiality to be securely stored. Data shall be retained for a minimum of 30 years, and responsible custodians shall be assigned to oversee the heath data management system.	◐	Data is managed by a responsible person. Worker's Health data was maintained based on legal requirements that is in accordance with IRMA requirement 3.2.6.2. Procedure for data management is not documented detailing every requirement for specific data stream.
3.2.6.3.	The operating company shall allow workers access to their personal information regarding accidents, dangerous occurrences, inspections, investigations and remedial actions, health surveillance and medical examinations.	◔	There are legal requirements regarding data management for workers in Mexico; these are closely followed by Carrizal. There was no evidence that personnel will not be allowed to access their personal information. There are some questions regarding the completeness and accuracy of the information due to data management gaps.

Chapter 3.3—Community Health and Safety			Basis for rating
3.3.1.1.	Critical The operating company shall carry out a scoping exercise to identify significant potential risks and impacts to community health and safety from mining-related activities. At minimum, the following sources of potential risks and impacts to community health and/or safety shall be considered: a. General mining operations; b. Operation of mine-related equipment or vehicles on public roads; c. Operational accidents;	◐	The risk assessment developed is not comprehensive in including chemical and physical risks related to mining activities; for instance, chemical substance release during truck transportation in shared roads with communities or tailings dam failure. Additionally, this risk assessment is lacking the information required by the template such as nature, magnitude, duration, mitigation and deadline.

	d. Failure of structural elements such as tailings dams, impoundments, waste rock dumps (see also IRMA Chapter 4.1); e. Mining-related impacts on priority ecosystem services (see also IRMA Chapter 4.6); f. Mining-related effects on community demographics, including in-migration of mine workers and others; g. Mining-related impacts on availability of services; h. Hazardous materials and substances that may be released as a result of mining-related activities (see also IRMA Chapter 4.1); and i. Increased prevalence of water-borne, water-based, water-related, and vector-borne diseases, and communicable and sexually transmitted diseases (e.g., HIV/AIDs, tuberculosis, malaria, Ebola virus disease) that could occur as a result of the mining project.		
3.3.1.2.	Scoping shall include an examination of risks and impacts that may occur throughout the mine lifecycle (e.g., construction, operation, reclamation, mine closure and post-closure).	◐	The risk assessment developed is focused on operational phase only.
3.3.1.3.	Scoping shall include consideration of the differential impacts of mining activities on vulnerable groups or susceptible members of affected communities.	⊗	
3.3.2.1.	The operating company shall carry out an assessment of risks and impacts to: a. Predict the nature, magnitude, extent and duration of the potential risks and impacts identified during scoping; b. Evaluate the significance of each impact, to determine whether it is acceptable, requires mitigation, or is unacceptable.	⊗	
3.3.3.1.	The operating company shall document and implement a community health and safety risk management plan that includes: a. Actions to be taken to mitigate the significant risks and impacts identified during its risk and impact assessment; and b. Monitoring that will be conducted to ensure that measures to prevent or mitigate impacts remain effective.	⊗	
3.3.3.2.	Mitigation measures shall prioritize the avoidance of risks and impacts over minimization and compensation.	⊗	
3.3.3.3.	The community health and safety risk management plan shall be updated, as necessary, based on the results of risk and impact monitoring.	⊗	
3.3.4.1.	If the operating company's risk and impact assessment or other information indicates that there is a significant risk of community exposure to HIV/AIDS, tuberculosis, malaria or another emerging infectious disease related to mining activities, the operating company shall develop, adopt and implement policies, business practices, and targeted initiatives: a. In partnership with public health agencies, workers' organizations and other relevant stakeholders, create and fund initiatives to	⊗	

	educate affected and vulnerable communities about these infections and modes of prevention of them, commensurate with the risks posed by mining; b. Operate in an open and transparent manner and be willing to share best practice for the prevention and treatment of these diseases with workers' organizations (e.g., trade unions), other companies, civil society organizations and policymakers; and c. Make information publicly available on its infectious disease mitigation program.		
3.3.4.2.	If the assessment demonstrates a significant risk of community exposure to HIV/AIDS, tuberculosis or malaria from mining-related activities, the following prevention and mitigation strategies shall be applied, as appropriate: a. In relation to HIV/AIDS, the operating company shall, at minimum: i. Provide free, voluntary and confidential HIV testing and counseling for all mine workers and employees; ii. Provide HIV/AIDS treatment for workers and employees where it cannot reasonably be assumed that this will be provided in an effective manner by public or private insurance schemes at an affordable rate; iii. Provide access for contractors to education and other preventative programs, and to work with the operating company's or facility's contracting companies or others to identify ways for contract workers to access affordable treatment; and iv. Work with public health authorities, communities, workers' organizations and other stakeholders towards ensuring universal access to treatment for dependents of mine workers/employees and affected community members. b. In relation to tuberculosis, the operating company shall, at minimum, provide free and voluntary testing for mine workers/employees where it is not reasonably likely to be provided by public or private health programs at an affordable rate. c. In relation to malaria, the operating company shall, at minimum: i. Develop a vector control plan; ii. Ensure that company facilities are not breeding environments for malaria-carrying mosquitoes; and iii. Provide protection from infection by malaria-carrying mosquitoes in company facilities and any company-provided housing.	—	National regulation does not allow the completion of medical exams not related to occupational H&S risks.
3.3.5.1.	The operating company shall collaborate with relevant community members and stakeholders, including workers who live in affected communities and individuals or representatives of vulnerable groups, in: a. Scoping of community health and safety risks and impacts related to mining;	◐	Carrizal Mining has initiated their process of stakeholder engagement related to health with five communities. The health program includes a health caravan in coordination with the Autonomous University of the State of Hidalgo and the Secretary of Health of the Municipality of Zimapán. The program included General Consultation, Dentistry,

	b. Assessment of significant community health and safety risks and impacts related to mining; c. Development of prevention or mitigation strategies; d. Collection of any data needed to inform the health risk and impact assessment process; and e. Design and implementation of community health and safety monitoring programs.		Nutrition and Preventive Health. In total, 188 people attended the caravan. Individual records were kept per person; however, the information in there was not yet processed.
3.3.6.1.	The operating company shall make information on community health and safety risks and impacts and monitoring results publicly available.	⊗	

Chapter 3.4—Mining and Conflict-Affected or High-Risk Areas		Basis for rating
Chapter not assessed	—	IRMA is not assessing this chapter during its Launch Phase, just collecting information to help inform future guidance on chapter implementation.

Chapter 3.5—Security Arrangements			Basis for rating
3.5.1.1.	The operating company shall adopt and make public a policy acknowledging a commitment to respect human rights in its efforts to maintain the safety and security of its mining project; and a commitment that it will not provide support to public or private security forces that have been credibly implicated in the infringement of human rights, breaches of international humanitarian law or the excessive use of force.	✓	A Property Security Policy, a Non-lethal Use of Force Policy, the Human Rights Policy and a Risk Management Procedure are in place and comply with the requirements. These policies were communicated internally and their external communication is yet in a planning phase; however, when interviewed, the Public Security Forces evidenced to know and assume the related United Nations Basic Principles.
3.5.1.2.	Critical The operating company shall have a policy and procedures in place regarding the use of force and firearms that align with the best practices expressed in UN Basic Principles on the Use of Force and Firearms. At minimum, the company's procedures shall require that: a. Security personnel take all reasonable steps to exercise restraint and utilize non-violent means before resorting to the use of force; b. If force is used it shall not exceed what is strictly necessary, and shall be proportionate to the threat and appropriate to the situation; and c. Firearms shall only be used for the purpose of self-defense or the defense of others if there is an imminent threat of death or serious injury.	✓	The Non-lethal Use of Force Policy and the Risk Management Procedure in place establishes the rules for use of force and firearms, which are aligned with the best practices expressed in UN Basic Principles on the Use of Force and Firearms.
3.5.1.3.	If private security is used in relation to the mining project, the operating company shall have a signed contract with private security providers that at minimum: a. Sets out agreed on principles that are consistent with the Voluntary Principles on Security and Human Rights and the operating company's procedures on the use of force and firearms; b. Delineates respective duties and obligations with respect to the provision of security in and around	◐	Carrizal Mining hires private security in relation to the mining project. The respective contract sets out agreement on principles that are consistent with the Human Rights Principles but not on Voluntary Principles. Regarding Human Rights, it states non-discrimination amongst those being hired and also adherence to company's policy on firearms and mentioned in the most general

	the mining project and, if relevant, along transport routes; and c. Outlines required training for security personnel.		term what the duties / details of the security forces are. This contract also outlines required training for security personnel in what regards to Human Rights but not Voluntary Principles. The company policies (Property Security, Non-lethal Use of Force, Human Rights) and the Risk Management Procedure are not mentioned in the contract.
3.5.1.4.	If public security forces are used to provide security to the mining project and/or transport routes, the operating company shall make a good faith effort to sign a Memorandum of Understanding (MoU) or similar agreement with public security providers that includes similar provisions to those in 3.5.1.3.	—	Carrizal Mining is not using Public Security Forces.
3.5.2.1.	The operating company shall assess security risks and potential human rights impacts that may arise from security arrangements. Assessments of security-related risks and impacts shall be updated periodically, including, at minimum, when there are significant changes in mining-related activities, security arrangements, or in the operating environment.	◐	Carrizal Mining developed their security risk assessment; however, the identified measures are related to the existing conditions. No specific actions were defined to address the high risks identified and these do not reflect potential human rights impacts.
3.5.2.2.	Assessments, which may be scaled to the size of the company and severity of security risks and potential human rights impacts, shall: a. Follow a credible process/methodology; b. Be carried out and documented by competent professionals; and c. Draw on credible information obtained from a range of perspectives, including men, women, children (or their representatives) and other vulnerable groups, relevant stakeholders and expert advice.	◐	The risk assessment completed has no direct relation with vulnerable groups or specific potential human rights impacts. A comprehensive identification of relevant security arrangements stakeholders was not completed (e.g. other mining companies operating in the vicinity).
3.5.2.3.	The scope of the security risk assessment shall include, but need not be limited to: a. Identification of security risks to the company, workers and communities, paying particular attention to risks to women, children and other vulnerable groups; b. Analysis of the political and security context in the host country context (e.g., the human rights records of the government and public and private security forces; adherence to the rule of law; corruption); c. Analysis of current and potential conflicts or violence in the host country and affected communities; and d. Risks associated with equipment transfers.	◐	The risk assessment completed has no identification of potentially impacted stakeholders or security risks associated to transfers routes. Limited analysis of the political and security context in the host country context was completed by the operator. However, this analysis didn't include identification of related affected communities and was not included in the risk assessment for addressing potential issues.
3.5.2.4.	The operating company shall develop and implement a risk management plan that includes actions to be taken to prevent or mitigate identified risks, and monitoring that will be conducted to ensure that mitigation measures are effective.	⊗	
3.5.2.5.	If the security risk assessment reveals the potential for conflicts between mine security providers and affected community members or workers, then the operating company shall collaborate with communities and/or workers to develop mitigation	—	No potential for conflicts between mine security providers and affected community members or workers was revealed in the security risk assessment and no evidences of such risk was identified during the site visit.

	strategies that are culturally appropriate and that take into consideration the needs of women, children and other vulnerable groups. If specific risks to human rights are identified in the assessment, the mitigation strategies shall conform with requirements in IRMA Chapter 1.3.		
3.5.3.1.	The operating company shall develop and implement due diligence procedures to prevent the hiring of company security personnel and private security providers who have been convicted of or credibly implicated in the infringement of human rights, breaches of international humanitarian law or the use of excessive force.	◐	Due diligence provisions were completed verbally with the older employees that were transferred from the prior security company (Policia Bancaria) to the current one (Consulmex). Also, the employees were required to provide their criminal history and complete psychological assessments. No written procedure was developed, to be applied both to the company/security firm as a whole and individuals.
3.5.3.2.	The operating company shall make a good faith effort to determine if public security personnel providing security to the mine have been convicted of or credibly implicated in the infringement of human rights, breaches of international humanitarian law or the use of excessive force.	—	The operating company is not hiring public security personnel to provide security to the mine.
3.5.4.1.	Prior to deployment of company or private security personnel, the operating company shall provide training that incorporates, at minimum, information related to ethical conduct and respect for the human rights of mine workers and affected communities, with particular reference to vulnerable groups, and the company's policy on the appropriate use of force and firearms. Initial training and refresher courses shall be mandatory for all operating company personnel involved in security, and for private security contractors that have not received equivalent training from their employers.	⊗	
3.5.4.2.	If public security forces are to be used, the operating company shall determine if public security personnel are provided with training on human rights and the appropriate use of force and firearms. If this training is not occurring, the company shall offer to facilitate training for public security personnel that provide mine-related security.	—	The operating company is not hiring public security personnel to provide security to the mine. Public security institutions will be called in case of crime.
3.5.5.1.	The operating company shall: a. Develop and implement systems for documenting and investigating security incidents, including those involving impacts on human rights or the use of force; b. Take appropriate actions, including disciplinary measures, to prevent and deter abusive or unlawful acts by security personnel and acts that contravene the company's policies on rules of engagement, the use of force and firearms, human rights, and other relevant policies; c. Take appropriate actions to mitigate and provide remediation for human rights impacts (as per IRMA Chapter 1.3), injuries or fatalities caused by security providers; d. Report security incidents, including any credible allegations of human rights abuses by private or public security providers, to the competent authorities and national human rights institutions,	◐	A template is being used by the security personnel to report any potential conflict with workers, third party requirement or unusual situation. These are sent to the legal area to be evaluated and followed-up on; if needed, the public security could be called to act. An emergencies manual establishes the actions that need to be implemented by the security personnel in case of emergency. In this document, strikes are mentioned as a potential scenario, however there is no further development of this point. Carrizal provided no evidence of integration of the safety emergency response plans where the medical assistance arrangements are defined. There is a disciplinary procedure in place managed by

	and cooperate in any investigations or proceedings; e. Provide medical assistance to all injured persons, including offenders; and f. Ensure the safety of victims and those filing security-related allegations.		the Human Capital and Legal areas; this would be applied to contractors as well.
3.5.5.2.	In the event of security-related incidents that result in injuries, fatalities or alleged human rights impacts on community members or workers, the company shall provide communities and/or workers with information on the incidents and any investigations that are underway, and shall consult with communities and/or workers to develop strategies to prevent the recurrence of similar incidents.	—	No security-related incidents that result in injuries, fatalities or alleged human rights impacts on community members or workers were reported. Currently, the system in place to register such events would be the report templates used by the security personnel or the grievance mechanism.
3.5.6.1.	If requested by a representative community structure, the operating company shall offer a briefing for community stakeholders on the company's procedures on the use of force and firearms.	—	A process or plan for communication with communities regarding the company's procedures on the use of force and firearms is not established in Carrizal's policies or procedures. According to information provided in the interviews, no request was made by a representative community structure for a briefing on the company's procedures on the use of force and firearms.
3.5.6.2.	The operating company shall consult regularly with stakeholders, including host governments and affected communities, about the impact of their security arrangements on those communities; and shall report to stakeholders annually on the company's security arrangements and its efforts to manage security in a manner that respects human rights.	⊗	
3.5.6.3.	Stakeholders shall have access to and be informed about a mechanism to raise and seek recourse for concerns or grievances related to mine security.	◔	Carrizal has informed workers and some communities about the grievance mechanism in place.
3.5.6.4.	If public security forces are providing security for any aspect of the mining project, the operating company shall encourage host governments to permit making security arrangements, such as the purpose and nature of public security, transparent and accessible to the public, subject to any overriding safety and security concerns.	—	The operating company is not hiring public security personnel to provide security to the mine. Public security institutions will be called in case of crime.

Chapter 3.6—Artisanal and Small-Scale Mining		Basis for rating
Chapter Not Relevant	—	No ASM mining in vicinity of the mine, and mine does not source materials from ASM mines.

Chapter 3.7—Cultural Heritage			Basis for rating
3.7.1.1.	Screening, assessment and the development and implementation of mitigation measures and procedures related to the management of cultural heritage shall be carried out by competent professionals.	◔	The individual who conducted the cultural heritage screen is not an expert in the field of cultural heritage, but did seek the advice of experts (government agencies) in determining whether or not there are likely to

			be cultural heritage impacts in the project area (it was determined that there are not). A full assessment - for which expertise would be necessary - was not required, as the mine determined that there was no risk of cultural heritage impacts in the area, and in any case was not a new mine. It did expand in 2010 (new tailings dam) but the screen performed did not reveal and cultural heritage in the project area, including the area of the new tailings dam. The mine did not develop mitigation or 'chance find' measures.
3.7.1.2.	Screening, assessment and the development of mitigation measures and procedures related to the management of cultural heritage shall include consultations with relevant stakeholders.	◐	There are no mitigation and management measures for cultural heritage, so there was no formal consultation with stakeholders concerning the form they should take. The company is, however, aware of many of the cultural heritage of the surrounding area and communities' perspectives on this matter, having ascertained this information through regular engagement and community solicitations for support for cultural events, parties, celebrations, etc. The only relevant "cultural heritage" identified was the "Baby of Prague" located in one of the communities; however, residents there stated that the mine has had no negative impact on this cultural heritage site.
3.7.1.3.	Cultural heritage assessments, management plans and procedures shall be made available upon request to community stakeholders and other stakeholders who have been engaged with the mine site on cultural heritage issues.	◐	No such requests have been made but the company indicates it would provide this information if requested.
3.7.2.1.	Prior to the development of a new mine, or when there are significant changes to mining-related activities, the operating company shall undertake a screening process to identify risks and potential impacts to replicable, non-replicable and critical cultural heritage from the proposed mining-related activities.	⊗	
3.7.2.2.	If the screening indicates the potential for replicable, non-replicable or critical cultural heritage to be encountered during mining-related activities, the operating company shall assess the nature and scale of the potential impacts and propose mitigation measures to avoid, minimize, restore or compensate for adverse impacts. Mitigation measures shall be consistent with the requirements below (see criteria 3.7.3, 3.7.4, 3.7.5 and 3.7.6), based on the type of cultural heritage likely to be affected.	—	The mine conducted a screening in 2019 that did not reveal any relevant cultural heritage.
3.7.3.1.	When tangible replicable cultural heritage that is not critical is encountered during mining-related activities the operating company shall apply mitigation measures that favor avoidance. Where avoidance is not feasible, the following mitigation hierarchy shall apply: a. Minimize adverse impacts and implement restoration measures, in situ, that ensure maintenance of the value and functionality of the	—	This criterion implies that no mitigation measures are required if a screen has determined that cultural heritage impacts are not likely. The screen conducted by the mine revealed no likely impacts, therefore this criterion is not relevant.

	cultural heritage, including maintaining or restoring any ecosystem processes needed to support it; b. Where restoration in situ is not possible, restore the functionality of the cultural heritage, in a different location, including the ecosystem processes needed to support it; c. Where restoring the functionality of the cultural heritage in a different location is not feasible, permanently remove historical and archeological artifacts and structures; and d. Where affected communities are using the tangible cultural heritage for long-standing cultural purposes compensate for loss of that tangible cultural heritage.		
3.7.3.2.	All mitigation work involving tangible replicable cultural heritage shall be carried out and documented by competent professionals, using internationally recognized practices for the protection of cultural heritage.	—	N/A (not relevant)
3.7.4.1.	The operating company shall not remove any tangible nonreplicable cultural heritage, unless all of the following conditions are met: a. The overall benefits of the mining project conclusively outweigh the anticipated cultural heritage loss from removal; and b. Any removal of cultural heritage is conducted using the best available technique.	—	N/A (not relevant)
3.7.4.2.	All mitigation work involving tangible non-replicable cultural heritage shall be carried out and documented by competent professionals, using internationally recognized practices for the protection of cultural heritage.	—	N/A (not relevant)
3.7.5.1.	Except under exceptional circumstances, the operating company shall not remove, significantly alter, or damage critical cultural heritage. In exceptional circumstances when impacts on critical cultural heritage are unavoidable, the operating company shall: a. Retain external experts to assist in the assessment and protection of critical cultural heritage, and use internationally recognized practices for the protection of cultural heritage; and b. Collaborate with affected communities to negotiate measures to protect critical cultural heritage and provide equitable outcomes for affected communities, and document the mutually accepted negotiation process and outcomes. (Note: Where impacts may occur to indigenous peoples' critical cultural heritage, negotiation shall take place through the Free, Prior and Informed Consent process outlined in IRMA Chapter 2.2 unless otherwise specified by the indigenous peoples).	—	N/A (not relevant)
3.7.5.2.	When a new mine is proposed within a legally protected cultural heritage area, including areas proposed by host governments for such designation, or a legally defined protected area buffer zone, the operating company shall: a. Comply with the requirement 3.7.5.1; b. Comply with the protected area's management plan;	—	Mine is an existing mine and also is not located within a legally protected cultural heritage area.

	c. Consult with agencies or bodies responsible for protected area governance and management, local communities and other key stakeholders on the proposed mining project; and d. Implement additional programs, as appropriate, to promote and enhance the conservation aims of the protected area.		
3.7.5.3.	IRMA will not certify new mines that are developed in or that adversely affect the following protected areas if those areas were designated to protect cultural values (See also Chapter 4.6). · World Heritage Sites, and areas on a State Party's official Tentative List for World Heritage Site Inscription; · International Union for Conservation of Nature (IUCN) protected area management categories I-III; · Core areas of UNESCO biosphere reserves.	—	Mine is an existing mine.
3.7.5.4.	An existing mine located entirely or partially in a protected area listed in 3.7.5.3 shall demonstrate that: a. The mine was developed prior to the area's official designation; b. Management plans have been developed and are being implemented to ensure that activities during the remaining mine lifecycle will not permanently and materially damage the integrity of the cultural values for which the area was designated or recognized; and c. The operating company collaborates with relevant management authorities to integrate the mine's management strategies into the protected area's management plan.	—	Mine is not located in a protected area.
3.7.5.5.	To safeguard irreplaceable cultural heritage and respect indigenous peoples' right to self-determination, the operating company shall not carry out new exploration or develop new mines in areas where indigenous peoples are known to live in voluntary isolation.	✓	There are no indigenous people living in voluntary isolation in the project area.
3.7.6.1.	Where the operating company proposes to use the intangible cultural heritage, including knowledge, innovations or practices of local communities for commercial purposes, the company shall inform these communities of their rights under national and international law, of the scope and nature of the proposed commercial development, and of the potential consequences of such development.	—	N/A (no intangible cultural heritage in the area). Communities did not express any concerns on this subject.
3.7.6.2.	The operating company shall not proceed with such commercialization unless it: a. Collaborates with affected communities using a good faith negotiation process that results in a documented outcome; and b. Provides for fair and equitable sharing of benefits from commercialization of such knowledge, innovation, or practice, consistent with local customs and traditions.	—	N/A (no intangible cultural heritage in the area). Communities did not express any concerns on this subject.
3.7.6.3.	Where the operating company proposes to use indigenous peoples' cultural heritage for commercial uses, negotiation shall take place through the Free, Prior and Informed Consent	—	N/A (no intangible cultural heritage in the area). Communities did not express any concerns on this subject.

	process outlined in IRMA Chapter 2.2 unless otherwise specified by the indigenous peoples.		
3.7.7.1.	A cultural heritage management plan or its equivalent shall be developed that outlines the actions and mitigation measures to be implemented to protect cultural heritage.	—	N/A (not relevant)
3.7.7.2.	If a new or existing mine is in an area where cultural heritage is expected to be found, the operating company shall develop procedures for: a. Managing chance finds, including, at minimum, a requirement that employees or contractors shall not further disturb any chance find until an evaluation by competent professionals is made and actions consistent with the requirements of this chapter are developed; b. Managing potential impacts to c. Allowing continued access to cultural sites, subject to consultations with affected communities and overriding health, safety, and security considerations; and d. If the mining project affects indigenous peoples' cultural heritage, the operating company shall collaborate with indigenous peoples to determine procedures related to the sharing of information related to cultural heritage.	—	N/A (no intangible cultural heritage in the area). Communities did not express any concerns on this subject.
3.7.7.3.	The operating company shall ensure that relevant employees receive training with respect to cultural awareness, cultural heritage site recognition and care, and company procedures for cultural heritage management.	⊗	

Principle 4: Environmental Responsibility

RATING LEGEND
Description of performance

✓	Fully meets
◕	Substantially meets
◑	Partially meets
✗	Does not meet
—	Not relevant

Chapter 4.1—Waste and Materials Management			Basis for rating
4.1.1.1.	The operating company shall develop a policy for managing waste materials and mine waste facilities in a manner that eliminates, if practicable, and otherwise minimizes risks to human health, safety, the environment and communities.	✓	Waste management policy is integrated in the current Environmental Policy: "appropriated waste management, minimizing its generation to the maximum possible extent or eliminating them if possible, reducing the risk on human health, and safely for environment and Communities", The policy is signed by the senior management team and reviewed every 5 years are earlier if changes. The policy is communicated to all workers during induction process and annually during refresher training. Although the policy is in place, some gaps were identified in its implementation.
4.1.1.2.	The operating company shall demonstrate its commitment to the effective implementation of the policy by, at minimum: a. Having the policy approved by senior management and endorsed at the Director/Governance level of the company; b. Having a process in place to ensure that relevant employees understand the policy to a degree appropriate to their level of responsibility and function, and that they have the competencies necessary to fulfill their responsibilities; c. Having procedures and/or protocols in place to implement the policy; and d. Allocating a sufficient budget to enable the effective implementation of the policy.	◑	1. Environmental policy is signed by the senior management. 2. The policy is communicated to employees during the induction program and periodic refreshers and posted in mine admin offices. 3. Employees are aware of the policy however deviations from the waste performance expectations (particularly Hazardous and special wastes) were observed as evidence that accountabilities, roles and responsibilities are still not well understood by personnel at different levels (miners, supervisors, superintendents, managers). 4. Mine waste facilities design and maintenance are performed by competent contractors and professionals. 5. Risk management program is in place, however inconsistencies in the hazards identification and risk evaluation were observed. 6. Maintenance program, including preventive maintenance, inspection programs are in place and followed. 7. Agreements with the company owner, and annual budget for tailings maintenance program are considered by contract.

4.1.2.1.	The operating company shall: a. Identify all materials, substances and wastes (other than mine wastes) associated with the mining project that have the potential to cause impacts on human health, safety, the environment or communities; and b. Document and implement procedures for the safe transport, handling, storage and disposal of those materials, substances and wastes.	◐	a. Site has an inventory of materials, substances and wastes (other than mine wastes) associated with the mining operations. SDS are maintained, however, the process to communicate the hazards is not fully effective to ensure personnel understand the potential EHS consequences of an inappropriate handling, use of PPE or environmental issues b. The organization has developed and implement procedures for transportation, handling, storage and disposal of materials, substances and wastes. Only approved and registered waste handling and disposal companies are used. c. Procedures in place but, several deviations observed. For example: a) Lack of labelling in several Hazardous waste containers at the main waste storage area; b) Waste log with inconsistencies, several fields empty which make difficult to track with the waste manifest form; c) segregation issues at generation points, lack of labelling, sub-standard storage conditions. All these observations represent non-compliance issues. The policy implementation and verification processes have not been effective to prevent these issues.
4.1.3.1.	The operating company shall identify all existing and/or proposed mine waste facilities that have the potential to be associated with waste discharges or incidents, including catastrophic failures, that could lead to impacts on human health, safety, the environment or communities.	✓	Several reports describing the mine waste facilities exists; for example, Tailing Dams Train Review (Revisión de las obras que conforman el Tren de Presas de jales y presa No. 9 de la Planta de Beneficio de San Francisco Zimapán Hgo. correspondiente a los meses de Marzo a Agosto del 2019), Geotechnical Report (Informe de la Revisión Geotécnica del Diseño de la Presa de Jales 9 - Informe No. 05-61-SGM/S), etc.
4.1.3.2.	The operating company shall perform a detailed characterization for each mine waste facility that has associated chemical risks. Characterization shall include: a. A detailed description of the facility that includes geology, hydrogeology and hydrology, climate change projections, and all potential sources of mining impacted water (MIW); b. Source material characterization using industry best practice to determine potential for acid rock drainage (ARD) or metals leaching (ML). This shall include: i. Analysis of petrology, mineralogy, and mineralization; ii. Identification of geochemical test units; iii. Estimation of an appropriate number of samples for each geochemical test unit; and iv. Performance of comprehensive geochemical testing on all samples from each geochemical test unit.	◐	The Operations Maintenance and Surveillance (OMS) manual (MANUAL DE OPERACIÓN MANTENIMIENTO Y VIGILANCIA DE LA PRESA DE JALES) describes a water sampling program for the tailings facility. The closure costs methodology and estimate (Metodologías y Estimación de Costos de Cierre, Servicios Geologos IMEx 2019) provides geochemical characterization, including testing of metals and ARD potential, for a limited number of samples of tailings and other materials from the tailings dams as well as a limited number of surface water samples. A detailed geochemical characterization program completed in accordance with industry best practices; however, a site water balance and chemical mass balance model have not been provided, it was not made available a receptors risk assessment and it is not clear if closure planning includes a closure

	c. A conceptual model that describes what is known about release, transport and fate of contaminants and includes all sources, pathways and receptors for each facility; d. Water balance and chemistry mass balance models for each facility; and e. Identification of contaminants of concern for the facility/source materials, and the potential resources at risk from those contaminants.		and post-closure chemical stability monitoring program.
4.1.3.3.	The operating company shall identify the potential physical risks related to tailings storage facilities and all other mine waste facilities where the potential exists for catastrophic failure resulting in impacts on human health, safety, the environment or communities. Evaluations shall be informed by the following: a. Detailed engineering reports, including site investigations, seepage and stability analyses; b. Independent technical review (See criteria 4.1.6) c. Facility classification based on risk level or consequence of a failure, and size of the structure/impoundment; d. Descriptions of facility design criteria; e. Design report(s); f. Short-term and long-term placement plans and schedule for tailings and waste rock or other facilities subject to stability concerns; g. Master tailings placement plan (based on life of mine); h. Internal and external inspection reports and audits, including, if applicable, an annual dam safety inspection report; i. Facility water balances (See also 4.1.3.2.d); and j. Dam breach inundation (if applicable) and waste rock dump runout analyses.	◐	Engineering design reports have been provided for various aspects of the tailings facility (e.g. PROYECTO: PRESA N° 9 INFORME DEL SISTEMA VERTEDOR DE EXCEDENCIAS, Ardici Tec 2013, etc.), however dam design and as-built reports signed by an engineer are not provided. The Engineer of Record (EOR) for each dam is not indicated. The tailings facility has an Operations Maintenance and Surveillance (OMS) manual (MANUAL DE OPERACIÓN MANTENIMIENTO Y VIGILANCIA DE LA PRESA DE JALES), however it does not detail requirements for external/third party inspections. Several reports indicate that internal inspections of the tailings dams are undertaken (e.g. Revisión de las obras que conforman el Tren de Presas de jales y presa No. 9 de la Planta de Beneficio de San Francisco Zimapán Hgo. correspondiente a los meses de Marzo a Agosto del 2019). Evidence of third party dam inspections and dam safety reviews, including cumulative risk of the nine dams installed, in accordance with international best practices, is not provided. Work has been completed to characterize the hydraulic characteristics of the tailings facility (ESTUDIO GEOHIDROLÓGICO PARA DETERMINAR EL COMPORTAMIENTO DEL FLUJO, 2018).
4.1.3.4.	Facility characterizations shall be updated periodically to inform waste management and reclamation decisions throughout the mine life cycle.	⊗	
4.1.3.5.	Use of predictive tools and models for mine waste facility characterization shall be consistent with current industry best practice, and shall be continually revised and updated over the life of the mine as site characterization data and operational monitoring data are collected.	⊗	
4.1.4.1.	Critical A risk-based approach to mine waste assessment and management shall be implemented that includes: a. Identification of potential chemical risks (see 4.1.3.2.e) and physical risks (see 4.1.3.3) during the project conception and planning phase of the mine life cycle; b. A rigorous risk assessment to evaluate the potential impacts of mine waste facilities on health, safety, environment and communities early in the life cycle;	◐	Carrizal Mining developed a risk matrix that identifies risks related to the mine wastes facilities and sets a number of measures to control those risks. However, there is no systematic approach and procedure in place to prioritize and follow the implementation of those actions (e.g. acquisition and installation of inclinometers). Although the company completed an environmental impact assessment for part of the tailings facility (Estudio de impacto ambiental, Operacion del 26% faltante de la presa de jales no.9), it is of a

	c. Updating of risk assessments at a frequency commensurate with each facility's risk profile, over the course of the facility's life cycle; and d. Documented risk assessment reports, updated when risks assessments are revised (as per 4.1.4.1.c).		qualitative nature. A risk-based approach to the tailings facility assessment (physical and chemical) and any updates has not been completed. Evidence of recent risk assessment reports has not been provided.
4.1.4.2.	The operating company shall carry out and document an alternatives assessment to inform mine waste facility siting and selection of waste management practices. The assessment shall: a. Identify minimum specifications and performance objectives for facility performance throughout the mine life cycle, including mine closure objectives and post-closure land and water uses; b. Identify possible alternatives for siting and managing mine wastes, avoiding a priori judgements about the alternatives; c. Carry out a screening or "fatal flaw" analysis to eliminate alternatives that fail to meet minimum specifications; d. Assess remaining alternatives using a rigorous, transparent decision-making tool such as Multiple Accounts Analysis (MAA) or its equivalent, which takes into account environmental, technical, socio-economic and project economics considerations, inclusive of risk levels and hazard evaluations, associated with each alternative; e. Include a sensitivity analysis to reduce potential that biases will influence the selection of final site locations and waste management practices; and f. Be repeated, as necessary, throughout the mine life cycle (e.g., if there is a mine expansion or a lease extension that will affect mine waste management).		An alternatives assessment study for the existing tailings facilities was not provided. Reportedly, alternatives are currently being assessed for new expansions of mine wastes facilities.
4.1.5.1.	Critical Mine waste facility design and mitigation of identified risks shall be consistent with best available technologies (BAT) and best available/applicable practices (BAP).		A geotechnical review of the tailings dam No. 9 (2005) design and a geotechnical review for the same dam expansion (2013) were completed according national and international references, where the safety levels were assessed. However, this do not include all the dams train risk identification and related mitigation has not been completed, in accordance with industry best practices.
4.1.5.2.	Mitigation of chemical risks related to mine waste facilities shall align with the mitigation hierarchy as follows: a. Priority shall be given to source control measures to prevent generation of contaminants; b. Where source control measures are not practicable or effective, migration control measures shall be implemented to prevent or minimize the movement of contaminants to where they can cause harm; and c. If necessary, MIW shall be captured and treated to remove contaminants before water is returned to the environment or used for other purposes.		Carrizal Mining uses diversion methods to separate natural water from mine-impacted water in the tailings facility. Water from the tailings facility is treated prior to discharge to the environment. Source control measures and mitigations in lieu of source control have not been fully assessed. The company conducts water monitoring downgradient of the tailings facility.
4.1.5.3.	For high-consequence rated mine waste facilities, a critical controls framework shall be developed that aligns with a generally accepted industry framework, such as, for example, the process outlined in Mining Association of Canada's Tailings Management Guide.		

4.1.5.4.	Mine waste management strategies shall be developed in an interdisciplinary and interdepartmental manner and be informed by site-specific characteristics, modeling and other relevant information.	◔	The tailings facility has an Operations Maintenance and Surveillance (OMS) manual (MANUAL DE OPERACIÓN MANTENIMIENTO Y VIGILANCIA DE LA PRESA DE JALES), which promotes and incorporates involvement from different on-site departments (e.g. Gerencia de Administración de Riesgos, Superintendencia de Planta y Superintendencia de Proyectos, Gerencia de Operaciones y el Superintendente de planta). Different relevant disciplines have been studied to characterize the tailings facility and tailings materials - e.g. chemical, physical, hydrological characterizations.
4.1.5.5.	The operating company shall develop an Operation, Maintenance and Surveillance (OMS) manual (or its equivalent) aligned with the performance objectives, risk management strategies, critical controls and closure plan for the facility, that includes: a. An operations plan that documents practices that will be used to transport and contain wastes, and, if applicable, effluents, residues, and process waters, including recycling of process waters; b. A documented maintenance program that includes routine, predictive and event-driven maintenance to ensure that all relevant parameters (e.g., all civil, mechanical, electrical and instrumentation components of a mine waste facility) are maintained in accordance with performance criteria, company standards, host country law and sound operating practices; c. A surveillance program that addresses surveillance needs associated with the risk management plan and critical controls management, and includes inspection and monitoring of the operation, physical and chemical integrity and stability, and safety of mine waste facilities, and a qualitative and quantitative comparison of actual to expected behavior of each facility; d. Documentation of facility-specific performance measures as indicators of effectiveness of mine waste management actions; and e. Documentation of risk controls and critical controls (see also 4.1.5.3), associated performance criteria and indicators, and descriptions of pre-defined actions to be taken if performance criteria are not met or control is lost.	◔	The tailings facility has an Operations Maintenance and Surveillance (OMS) manual (MANUAL DE OPERACIÓN MANTENIMIENTO Y VIGILANCIA DE LA PRESA DE JALES). The document includes a detailed operating plan, maintenance program and surveillance program. Quantitative risk management and critical controls with performance indicators and criteria are not included. Actions to be taken when criteria not met are not defined.
4.1.5.6.	Critical On a regular basis, the operating company shall evaluate the performance of mine waste facilities to: a. Assess whether performance objectives are being met (see 4.1.4.2.a and 4.1.5.5); b. Assess the effectiveness of risk management measures, including critical controls (see 4.1.5.3); c. Inform updates to the risk management process (see 4.1.4.1.c) and the OMS (see 4.1.5.7); and d. Inform the management review to facilitate continual improvement (see 4.1.5.8).	◔	The company has internal programs to monitor the performance of the tailings dams (Revisiónes de las obras que conforman el Tren de Presas de jales y presa No. 9). Performance objectives and indicators, and risk assessment with resulting measures and critical controls, are not fully defined in accordance with industry best practices. See comment for 4.1.4.1. Some critical controls are not being consistently monitored (e.g. Inclinometers installation).
4.1.5.7.	The OMS manual shall be updated and new or revised risk and critical control strategies implemented if information reveals that mine waste facilities are not being effectively operated or	◔	The company has internal programs to monitor the performance of the tailings dams (Revisiónes de las obras que conforman el Tren de Presas de jales y presa No. 9). The

	maintained in a manner that protects human health and safety, and prevents or otherwise minimizes harm to the environment and communities.		internal inspection reports provide recommendations for corrective actions. Documents do not provide evidence for evaluation of the measures and controls applied. The company has previously revised the tailings facility OMS Manual (MANUAL DE OPERACIÓN MANTENIMIENTO Y VIGILANCIA DE LA PRESA DE JALES). The version (#3) provided is dated to 2016. The OMS Manual does not include updates in accordance with recent industry best practices or in consideration of recent facility performance and effectiveness of performance measures.
4.1.5.8.	The operating company shall implement an annual management review to facilitate continual improvement of tailings storage facilities and all other mine waste facilities where the potential exists for contamination or catastrophic failure that could impact human health, safety, the environment or communities. The review shall: a. Align with the steps outlined in the Mining Association of Canada's Tailings Management Protocol or a similar framework; and b. Be documented, and the results reported to an accountable executive officer.	⊗	
4.1.6.1.	The siting and design or re-design of tailings storage facilities and other relevant mine waste facilities, and the selection and modification of strategies to manage chemical and physical risks associated with those facilities shall be informed by independent reviews throughout the mine life cycle.	◔	Independent review of the tailings facilities has occurred at least once (e.g. AECOM Key Findings & Recommendations by Site). No evidence is provided that demonstrates that the company has an internal policy for independent tailings facility reviews.
4.1.6.2.	Reviews shall be carried out by independent review bodies, which may be composed of a single reviewer or several individuals. At high-risk mine waste facilities, a panel of three or more subject matter experts shall comprise the independent review body.	⊗	
4.1.6.3.	Independent reviewers shall be objective, third-party, competent professionals.	⊗	
4.1.6.4.	Independent review bodies shall report to the operation's general manager and an accountable executive officer of the operating company or its corporate owner.	⊗	
4.1.6.5.	The operating company shall develop and implement an action plan in response to commentary, advice or recommendations from an independent review, document a rationale for any advice or recommendations that will not be implemented, and track progress of the plan's implementation. All of this information shall be made available to IRMA auditors.	⊗	
4.1.7.1.	Stakeholders shall be consulted during the screening and assessment of mine waste facility siting and management alternatives (see 4.1.4.2), and prior to the finalization of the design of the facilities.	⊗	
4.1.7.2.	Emergency preparedness plans or emergency action plans related to catastrophic failure of mine	⊗	

	waste facilities shall be discussed and prepared in consultation with potentially affected communities and workers and/or workers' representatives, and in collaboration with first responders and relevant government agencies. (See also IRMA Chapter 2.5).		
4.1.7.3.	Emergency and evacuation drills (desktop and live) related to catastrophic failure of mine waste facilities shall be held on a regular basis. (See also IRMA Chapter 2.5).	⊗	
4.1.7.4.	If requested by stakeholders, the operating company shall report to stakeholders on mine waste facility management actions, monitoring and surveillance results, independent reviews and the effectiveness of management strategies.	—	No requests were identified by the interviewed stakeholders, during the audit.
4.1.8.1.	Critical At the present time, mine sites using riverine, submarine and lake disposal of mine waste materials will not be certified by IRMA.	✓	No riverine, submarine and lake disposal of mine waste materials were identified during the audit.

Chapter 4.2—Water Management			Basis for rating
4.2.1.1.	The operating company shall identify water users, water rights holders and other stakeholders that may potentially affect or be affected by its mine water management practices.	◔	Efforts to identify water users and other stakeholders potentially affected or be affected by Carrizal mine water management practices have been carried out, however in this initial phase only nearby communities have been identified but other stakeholders missed, for example other mining companies, governmental agencies, which have significant interest in water issues. The process is still in early stages of development. For example, there is no evidence of further investigation regarding permits or licenses and maps related to water rights, locations of groundwater wells in the area, etc.; other water users affecting mine operations (other mines for example). Water uses and users is not completed yet.
4.2.1.2.	The operating company shall conduct its own research and collaborate with relevant stakeholders to identify current and potential future uses of water at the local and regional level that may be affected by the mine's water management practices.	◔	Efforts to identify water users and other stakeholders potentially affected or be affected by Carrizal mine water management practices have been carried out, however in this initial phase only nearby communities have been identified and other stakeholders were overlooked, for example other mining companies, governmental agencies, which have significant interest in water issues. The process is still in early stages of development. For example: a) there is no evidence of further investigation regarding permits or licenses and maps related to water rights, locations of groundwater wells in the area, etc.; b) water uses and users study is not completed yet. Not mention aquatic life or drinking water as a possible use. c) Degree of collaboration with stakeholders on the water use study is unknown.

4.2.1.3.	The operating company shall conduct its own research and collaborate with relevant stakeholders to identify and address shared water challenges and opportunities at the local and regional levels, and shall take steps to contribute positively to local and regional water stewardship outcomes.	◐	Efforts to identify water users and other stakeholders potentially affected or be affected by Carrizal mine water management practices have been carried out, as well as initial meetings with these communities to discuss water concerns and challenges. Stakeholders participation process to address shared water challenges and opportunities at local and regional levels still in early stages of development
4.2.2.1.	The operating company shall gather baseline or background data to reliably determine: a. The seasonal and temporal variability in: i. The physical, chemical and biological conditions of surface waters, natural seeps/springs and groundwater that may be affected by the mining project; ii. Water quantity (i.e., flows and levels of surface waters, natural seeps/springs and groundwater) that may be affected by the mining project; and b. Sources of contamination and changes in water quantity or quality that are unrelated to the mining project.	◐	Operating company started operations in 2009 and some data is available since then. Hydrological and Hydrogeological studies have been carried out showing the "current" situation. There are other data from the previous operating company and owner but the data have not been used yet to determine a baseline or at least to have more information regarding to the potential changes in the water quality, quantity and aquatic life. These studies were not available during the assessment. The site is in the process to collect more information not only from previous operators but from governmental agencies, but still in early stages of development. No data regarding aquatic life available and very limited information in relation to quantity and flows in water bodies (with the exception of the mine water pumping system) and aquifer characteristics Although there is an understanding of others sources of contamination unrelated to Carrizal operations (upstream mines and Zimapán sewer system discharges), documented evidence is not available.
4.2.2.2.	The operating company shall carry out a scoping process that includes collaboration with relevant stakeholders, to identify potentially significant impacts that the mining project may have on water quantity and quality, and current and potential future water uses. The scoping process shall include evaluation of: a. The mining-related chemicals, wastes, facilities and activities that may pose a risk to water quality; and b. The mine's use of water, and any mining activities that may affect water quantity.	◐	The site performed an environmental impact assessment which includes water impacts, however, this is high level assessment and limited to the impacts of the construction of Tailings ponds #9 (before EIA was required in Mexico). Specific water impact assessment has not been fully developed, including incomplete list of contaminants of concern such as cyanide and water volumes. The site is in the initial implementation of stakeholder consultation and identification of current and potential water use.
4.2.2.3.	Where potential significant impacts on water quantity or quality, or current and future water uses have been identified, the operating company shall carry out the following additional analyses to further predict and quantify the potential impacts: a. Development of a conceptual site model (CSM) to estimate the potential for mine-related contamination to affect water resources; b. Development of a numeric mine site water balance model to predict impacts that might occur at different surface water flow/groundwater	◐	Even though hydrogeological studies in both mines (May 2019) and tailings facilities have been carried out, these studies have been focused on operational needs particularly on pumping simulation to forecast water avenues and prevent landslides or risk of flooding as well as to define the strategic planning of pumping stations. Other studies have been developed (Movimiento de Masa por Falla en presa de Jales No. 9. Penoles (ICO PRES), 2018) to predict or quantify potential mining-related impacts on water resources;

	level conditions (e.g., low, average and high flows/levels); c. If relevant, development of other numerical models (e.g., hydrogeochemical/hydrogeological) to further predict or quantify potential mining-related impacts on water resources; and d. Prediction of whether water treatment will be required to mitigate impacts on water quality during operations and mine closure/post-closure.		and the closure plan include several activities/programs/plans to mitigate and minimize the potential impact at the end of the life of the mine. However there is no evidence of a) CSM to estimate the potential for mine-related contamination to affected water resources; b) water balance model to predict impacts that may occur at different surface water flow/groundwater level conditions.
4.2.2.4.	Use of predictive tools and models shall be consistent with current industry best practices, and shall be continually revised and updated over the life of the mine as operational monitoring and other relevant data are collected.	◐	Hydrological studies have been performed (May 2019) but focused on operational needs particularly on pumping simulation to forecast water avenues and prevent landslides or risk of flooding as well as to define the strategic planning of pumping stations. In addition, a predictive failure model for Tailing 9 was carried out in 2018 and recommendations under evaluation and implementation are in place. But the process is still in early stages of development.
4.2.3.1.	The operating company, in collaboration with relevant stakeholders, shall evaluate options to mitigate predicted significant adverse impacts on water quantity and quality, and current and potential future water uses that may be affected by the mine's water management practices. Options shall be evaluated in a manner that aligns with the mitigation hierarchy.	◐	Actions to mitigate the potential impact on water quality are based on the SEMARNAT resolution approving the Tailing pond #9 Environmental Impact Manifest (MIA), which include a) Contingency plans to address accidental spills, and b) Periodic monitoring of groundwater down stream of the tailing pond. The EIA required a consultation with stakeholders according to Mexican regulation but this was limited to the publication of a summary in a local and a federal newspaper. The site has recently started the stakeholders participation program and significant efforts have been made to share with the communities the potential impacts to water quality and quantity. Some mitigations actions have been proposed, however the process is still in early stages of development.
4.2.3.2.	If a surface water or groundwater mixing zone is proposed as a mitigation strategy: a. A risk assessment shall be carried out to identify, evaluate and document risks to human health, local economies and aquatic life from use of the proposed mixing zone, including, for surface water mixing zones, an evaluation of whether there are specific contaminants in point source discharges, such as certain metals, that could accumulate in sediment and affect aquatic life; and b. If any significant risks are identified, the operating company shall develop mitigation measures to protect human health, aquatic life and local economies including, at minimum: i. Surface water or groundwater mixing zones are as small as practicable; ii. Water in a surface water mixing zone is not lethal to aquatic life; iii. A surface water mixing zone does not interfere with the passage of migratory fish;	—	Mixing zone is not being proposed or used.

	iv. Surface water or groundwater mixing zones do not interfere with a pre-mine use of water for irrigation, livestock or drinking water, unless that use can be adequately provided for by the operating company through another source of similar or better quality and volume, and that this substitution is agreed to by all potentially affected water users; and v. Point source discharges into a surface water mixing zone match the local hydrograph for surface water flows to the extent practicable.		
4.2.3.3.	Waters affected by the mining project shall be maintained at a quality that enables safe use for current purposes and for the potential future uses identified in collaboration with relevant stakeholders (see 4.2.1.2). In particular, the operating company shall demonstrate that contaminants measured at points of compliance are: a. Being maintained at baseline or background levels; or b. Being maintained at levels that are protective of the identified uses of those waters (See IRMA Water Quality Criteria by End Use Tables 4.2.a to 4.2.h, which correspond to particular end uses).	◐	The site has a water monitoring program following the Mexican legal requirements. Not all the IRMA water quality criteria have been included in the monitoring program, but for 2020 the site plans to include them. However besides the monitoring plan the whole water management program has not been fully developed to include all the IRMA requirements. Considering that the water baseline has not yet been completed the objective is to maintain the quality at levels that are protective of the identified uses (present and future) for those waters. The site has recently started the stakeholder participation program to discuss these issues.
4.2.3.4.	Unless agreed by potentially affected stakeholders, water resources affected by mining activities shall be maintained at quantities that enable continued use of those resources for current purposes and for the potential future uses identified in collaboration with relevant stakeholders (see 4.2.1.2).	◐	The site has a water monitoring program following the Mexican legal requirements. The identification of current and future uses of water considering local and regional stakeholders have not been completed yet. The site recently started the stakeholder participation program for the nearby communities, but still in early stages of development. One of the concerns expressed by communities downstream of Monte mine is the potential reduction in water in Arroyo San Miguel after the closure of the mine, which is currently in use for agriculture purposes. Discussion about this potential impact has been discussed with the communities, but mitigations plans and actions are still in early stages of development. Hydrogeological and Hydrologic studies have been recently performed and updated but with more operational approach, however important data regarding water quantities and seasonal changes is available.
4.2.4.1.	Critical (a through e) The operating company shall develop and document a program to monitor changes in water quantity and quality. As part of the program the operating company shall: a. Establish a sufficient number of monitoring locations at appropriate sites to provide reliable data on changes to water quantity and the physical, chemical and biological conditions of surface waters, natural springs/seeps and groundwater (hereafter referred to as water characteristics); b. Sample on a frequent enough basis to account for seasonal fluctuations, storm events and extreme	◐	Organization has a monitoring program which is under review and upgrade. However gaps were observed, including: a) the current number of monitoring locations is based on the agency resolution but there is no technical document supporting the sufficiency of the number of monitoring locations; b) monitoring have not been always performed in a way that could facilitate the understanding of seasonal changes; c) no trigger levels defined; d) No monitoring of aquatic life; d) depending on the budget

	events that may cause changes in water characteristics; c. Establish trigger levels and/or other indicators to provide early warning of negative changes in water characteristics; d. Sample the quality and record the quantity of mine-affected waters destined for re-use by non-mining entities; e. Use credible methods and appropriate equipment to reliably detect changes in water characteristics; and f. Use accredited laboratories capable of detecting contaminants at levels below the values in the IRMA Water Quality Criteria by End-Use Tables.		availability more locations are added, but this process is not technically supported; Sampling is performed by accredited laboratories. IRMA Water Quality Criteria are included in the 2020 monitoring plan. Maintenance program of the current water system infrastructure in place.
4.2.4.2.	Samples shall be analyzed for all parameters that have a reasonable potential to adversely affect identified current and future water uses. Where baseline or background monitoring, source characterization, modeling, and other site-specific information indicate no reasonable potential for a parameter to exceed the baseline/background values or numeric criteria in the IRMA Water Quality Criteria by End-Use Tables (depending on the approach used in 4.2.3.3), those parameters need not be measured on a regular basis.	◐	Monitoring program has been implemented following the Mexican requirements, but not for all parameters with the potential to adversely impact water resources. This year they've added 10 more parameters to make sure they're getting all the IRMA water quality parameters.
4.2.4.3.	The operating company shall actively solicit stakeholders from affected communities to participate in water monitoring and to review and provide feedback on the water monitoring program: a. Participation may involve the use of independent experts selected by the community; and b. If requested by community stakeholders, costs related to participation in monitoring and review of the monitoring program shall be covered in full or in part by the company, and a mutually acceptable agreement for covering costs shall be developed.	◐	The site has recently started a stakeholder engagement program and several meetings have been held with nearby communities to present and explain the results of water monitoring. On some occasions, representatives of the community have participated in the sampling, sending the samples to another laboratory or sending the results to an independent expert for evaluation. However, stakeholder participation in the water monitoring program is still in the early stages of development.
4.2.4.4.	Critical The operating company shall develop and implement an adaptive management plan for water that: a. Outlines planned actions to mitigate predicted impacts on current and future uses of water and natural resources from changes in surface water and groundwater quality and quantity related to the mining project; and b. Specifies adaptive management actions that will occur if certain outcomes (e.g., specific impacts), indicators, thresholds or trigger levels are reached, and timelines for their completion.	◐	The organization has developed a Mitigation plan to prevent degradation of underground water resources which goal is to maintain the water quality, at the initial state of Carrizal operations. This plan has 3 specific objectives: a) Use the three monitoring wells of the groundwater tables already established downstream of the tailings dam No. 9, to ensure that the quality of groundwater is maintained at the quality established by NOM 001-SEMARNAT 1996 for agriculture; b) Ensure that the preventive measures established, both in the process plant, and in the operation of the tailing dam are effective to avoid contamination of the groundwater in the area; and c) Adequately adapt preventive measures in the handling of substances for the process of beneficiation of minerals at the San Francisco Plant. Preventive actions include operational controls in the process plant, process water recirculation, inspections and procedures to minimize the risk of spills and the tailings

			operations program, maintenance of storm water drainages to prevent its incorporation into the tailing dam. Some mitigation actions have been considering in case of exceedances, deviations from expected outcomes, or emergency situations, but this plan is not fully in compliance with the IRMA adaptive plan requirements including: a) Not all the sources of potential contamination have been clearly identified; b) not water balance; c) No conceptual water model; d) not all the current and future water uses have been identified (fishing and drinking water); e) Quality monitoring data do not include all the IRMA required parameters and no data of flows or water quantity; f) No monitoring of aquatic life; g) Indicators, thresholds or trigger levels have not been defined and therefore no actions have been identified in case of reaching these levels. All these aspects are key to develop and effective adaptive plan for water.
4.2.4.5.	Annually or more frequently if necessary (e.g., due to changes in operational or environmental factors), the operating company shall review and evaluate the effectiveness of adaptive management actions, and, as necessary, revise the plan to improve water management outcomes.	◐	The site is currently updating the water management plan, Mitigation plan to prevent degradation of water resources (Programa de mitigación de fuentes para prevenir la degradación de los recursos hidricos) to integrated all IRMA requirements.
4.2.4.6.	Community stakeholders shall be provided with the opportunity to review adaptive management plans and participate in revising the plans.	◐	Efforts to integrate community in the discussion of the water management plan, Mitigation plan to prevent degradation of water resources, have been made by the company. Carrizal plans to update the current Mitigation plan Mitigation plan to prevent degradation of water resources to include all the IRMA requirements with the participation of the main stakeholders as part of those requirements.
4.2.5.1.	The operating company shall publish baseline or background data on water quantity and quality, and the following water data shall be published annually, or at a frequency agreed by stakeholders from affected communities: a. Monitoring data for surface water and groundwater points of compliance; and b. Monitoring data for water quantity (i.e., flows and levels of surface waters, springs/seeps and groundwater), and the volume of water discharged and extracted/pumped for mining operations.	◐	The site has started the communication of its water monitoring results with representative of the nearby communities and evidence is available. However, no agreement has yet been achieved on how this data will be published and the frequency. Evidence that water monitoring data (hard copy reports) have been shared with community representatives was available. Besides this initiative, Carrizal has made efforts to inform communities the availability upon request of this monitoring data, which has already happened.
4.2.5.2.	The operating company shall develop and implement effective procedures for rapidly communicating with relevant stakeholders in the event that there are changes in water quantity or quality that pose an imminent threat to human health or safety, or commercial or natural resources.	◐	Procedure for internal and external communications has been developed, but still in early stages of diffusion and implementation. Regarding to Emergency Response in case of tailings failure the organization is currently updating the plan to integrate APELL guidelines. A list with phone numbers and addresses of the main

			stakeholder representatives is available in the EHS department if needed.
4.2.5.3.	The operating company shall discuss water management strategies, performance and adaptive management issues with relevant stakeholders on an annual basis or more frequently if requested by stakeholders.	◐	The site has recently started the stakeholder participation/communication program. Meetings with representative of the nearby communities have been carried out to discuss monitoring results, plans and strategies. The process is still in early stages of implementation.

Chapter 4.3—Air Quality			Basis for rating
4.3.1.1.	The operating company shall carry out air quality screening to determine if there may be significant air quality impacts associated with its operations.	◐	The site has developed an environmental aspects matrix to evaluate the air quality impacts and the main air emission sources as well as a community health and safety risks matrix identifying all the impacted areas. However, gaps observed: a) site-specific emissions inventory with estimated sources and quantities of releases not developed yet; b) risk assessment does not identify all air emissions sources for example dust from tailings or hauling / transportation of materials on the shared, unpaved road, and emissions from mine exhaust/ventilation systems.
4.3.1.2.	During screening, or as part of a separate data gathering effort, the operating company shall establish the baseline air quality in the mining project area.	◐	Due to the fact that the mine is an existing one, the site is in the process of establish an estimate of the air quality background in absence of the mining operation.
4.3.1.3.	If screening or other credible information indicates that air emissions from mining-related activities may adversely impact human health, quality of life or the environment, the operating company shall undertake an assessment to predict and evaluate the significance of the potential impacts.	◐	Evaluation of the potential impacts on priority areas (residential) have been performed. However, because screening failed to identify all potential sources, which could impact air quality, gaps in the risk assessment were observed. For example: a) dust from tailings or unpaved roads; b) emissions from mine exhaust/ventilation systems. Air quality has been identified as a "significant" impact.
4.3.1.4.	The assessment shall include the use of air quality modeling and monitoring consistent with widely accepted and documented methodologies to estimate the concentrations, transport and dispersion of mining-related air contaminants.	◐	The assessment is not fully conforming to IRMA requirements. The monitoring program has been developed and implemented according to the Mexican regulations. Modeling does not include pollutant transport and dispersion scenarios
4.3.2.1.	Critical If significant potential impacts on air quality are identified, the operating company shall develop, maintain and implement an air quality management plan that documents measures to avoid, and where that is not possible, minimize adverse impacts on air quality.	◐	Air Quality Plan is in place, and mitigation actions to reduce dust generation have been implemented (dust suppression system in the crushers area and daily road watering). However gaps were observed including: a) the risk assessment does not consider all the potential impacts, for example dust from tailings or hauling/transportation materials (which is a significant community concern and Carrizal is perceived as one of the main offender) and actions to mitigate these

			aspects not included in the plan; b) monitoring plan has not included tailings down gradient monitoring stations (it is planned for 2020, but no base line available); c) besides PM10 no other parameters (such as PM 2.5 and Lead) have been systematically monitored to detect potential impacts; d) Current operational and maintenance cleaning practices do not contribute to achieve the air quality goal.
4.3.2.2.	Air quality management strategies and plans shall be implemented and updated, as necessary, over the mine life.	◐	Some, but not all, air quality management strategies and plans are updated either on a regular basis or as necessary, such as when there are changes to mining operations that lead to new or reduced sources of air emissions. Annual air quality monitoring sampling is performed according to legal requirements established by the SEMARNAT Resolution for Carrizal mine and the Mexican norm for air quality. Depending on budget availability more monitoring stations are tested, however there is no systematic approach to determine the sufficiency of the monitoring locations besides the legal requirements.
4.3.3.1.	The operating company shall monitor and document ambient air quality and dust associated with the mining project by using personnel trained in air quality monitoring.	✓	Only accredited companies with competent personnel are hired to perform air monitoring.
4.3.3.2.	Ambient air quality and dust monitoring locations shall be situated around the mine site, related operations and transportation routes and the surrounding environment such that they provide a representative sampling of air quality sufficient to demonstrate compliance or non-compliance with the air quality and dust criteria in 4.3.4.3, and detect air quality and dust impacts on affected communities and the environment. Where modeling is required (see 4.3.1.4) air monitoring locations shall be informed by the air quality modeling results.	◐	The monitoring locations are situated mainly around the process plant, which has been identified as the main source of dust emissions. Due to budget restrictions other monitoring locations to measure other sources (transportation, tailings, etc.) have not been systematically included in the monitoring campaigns.
4.3.4.1.	New mines and existing mines shall comply with the European Union's Air Quality Standards (EU Standards) as amended to its latest form (See Table 4.3, below) at the boundaries of the mine site and transportation routes, and/or mitigate exceedances as follows: a. If a mine is located in an air shed where baseline air quality conditions meet EU Standards, but emissions from mining-related activities cause an exceedance of one or more parameters, the operating company shall demonstrate that it is making incremental reductions in those emissions, and within five years demonstrate compliance with the EU Standards; or b. If a mine is located in an air shed where baseline air quality is already degraded below EU Standards, the operating company shall demonstrate that emissions from mining-related activities do not exceed EU Standards, and make incremental improvements to the air quality in	—	This requirement is not to be scored during Launch Phase.

	the air shed that are at least equivalent to the mining project's emissions.		
4.3.4.2.	As an alternative to 4.3.4.1, the operating company may undertake a risk-based approach to protecting air quality as follows: a. New and existing mines shall comply with host country air quality standards at a minimum, and where no host country standard exists mines shall demonstrate compliance with a credible international best practice standard; b. Where compliance is met for host country standards but the mine experiences a residual risk related to its air emissions, then more stringent international best practice standards shall apply; c. Where compliance is met for international best practice standards and a mine still experiences a residual risk from its air emissions, then the mine shall set more stringent self-designed limits, and implement additional mitigation measures to meet those limits; and d. For all air-emissions-related risks, the mine shall demonstrate that it is making incremental reductions in emissions, through a multi-year phased plan with defined timelines.	—	This requirement is not to be scored during Launch Phase.
4.3.4.3.	Dust deposition from mining-related activities shall not exceed 350 mg/m2/day, measured as an annual average. An exception to 4.3.4.3 may be made if demonstrating compliance is not reasonably possible through ordinary monitoring methods. In such cases the operating company shall utilize best available practices to minimize dust contamination.	—	This requirement is not to be scored during Launch Phase.
4.3.5.1.	The operating company shall ensure that its air quality management plan and compliance information is up-to-date and publicly available, or made available to stakeholders upon request.	◐	The mine air quality management plan is publicly available or made available to stakeholders upon request but no stakeholder requests have yet been made. The process is in early stages of implementation

Chapter 4.4—Noise and Vibration			Basis for rating
4.4.1.1.	The operating company shall carry out screening to determine if there may be significant impacts on offsite human noise receptors from the mining project's noise and/or vibration. Screening is required at all new mines, and also at existing mines if there is a proposed change to the mine plan that is likely to result in a new source of noise or vibration or an increase in existing noise or vibration levels.	—	It is not a new mine and there were no modifications, but there was no noise baseline. New baseline was performed in the Plant, where there are human receptors.
4.4.1.2.	If screening identifies potential human receptors of noise from mining-related activities, then the operating company shall document baseline ambient noise levels at both the nearest and relevant offsite noise receptors.	✓	New base line performed in 2018 - New one scheduled for 2020 due to operational changes.
4.4.2.1.	If screening or other credible information indicates that there are residential, institutional or educational noise receptors that could be affected	✗	

	by noise from mining-related activities, then the operating company shall demonstrate that mining-related noise does not exceed a maximum one-hour LAeq (dBA) of 55 dBA during the hours of 07:00 to 22:00 (i.e., day) and 45 dBA at other times (i.e., night) at the nearest offsite noise receptor. These hours may be adjusted if the operating company can justify that alternative hours are necessary and/or appropriate because of local, cultural or social norms.		
4.4.2.2.	The following exceptions to 4.4.2.1 apply: a. If baseline ambient noise levels exceed 55 dBA (day) and/or 45 dBA (night), then noise levels shall not exceed 3 dB above baseline as measured at relevant offsite noise receptors; and/or b. During periods of blasting, the dBA levels may be exceeded, as long as the other requirements in 4.4.2.4 are met.	◐	The limits were not surpassed by a relevant amount of dbA (between 3 and 9) for the IRMA standard. Actions were immediately taken and resampling is being coordinated.
4.4.2.3.	If screening or other credible information indicates that there are only industrial or commercial receptors that may be affected by noise from mining-related activities, then noise measured at the mine boundary or nearest industrial or commercial receptor shall not exceed 70 dBA.	—	Not applicable due to location and data seen.
4.4.2.4.	If screening or other credible information indicates that noise or vibration from blasting activities may impact human noise receptors, then blasting operations at mines shall be undertaken as follows: a. A maximum level for air blast overpressure of 115 dB (Lin Peak) shall be exceeded on no more than 5 % of blasts over a 12-month period; b. Blasting shall only occur during the hours of 09:00 to 17:00, on traditionally normal working days; and c. Ground vibration (peak particle velocity) shall neither exceed 5 mm/second on 9 out of 10 consecutive blasts, nor exceed 10 mm/second at any time.	—	UG mine and reports from past blasting did not indicated any relevant impact. No credible complaints have been reported about blasting noise or vibration from nearby communities.
4.4.2.5.	Mines may undertake blasting outside of the time restraints in 4.4.2.4.b when the operating company can demonstrate one or more of the following: a. There are no nearby human noise receptors that will be impacted by blasting noise or vibration; b. Alternative hours are necessary and/or appropriate because of local, cultural or social norms; and/or c. Potentially affected human receptors have given voluntary approval for the expanded blasting hours.	—	Not applicable due to location and evidence reviewed.
4.4.2.6.	If a credible, supported complaint is made to the operating company that noise or vibration is adversely impacting human noise receptors, then the operating company shall consult with affected stakeholders to develop mitigation strategies or other proposed actions to resolve the complaint. Where complaints are not resolved then other options, including noise monitoring and the implementation of additional mitigation measures, shall be considered.	—	No complaints seen in complaint records.

4.4.2.7.	All noise- and vibration-related complaints and their outcomes shall be documented.	—	No complaints seen in complaint records.
4.4.3.1.	When stakeholders make a noise-related complaint, the operating company shall provide relevant noise data and information to them. Otherwise, noise data and information shall be made available to stakeholders upon request.	◔	No complaints seen in complains records. In my case the data was available upon request. There were no records of the contrary.

Chapter 4.5—Greenhouse Gas Emissions			Basis for rating
4.5.1.1.	Critical The operating company or its corporate owner shall develop and maintain a greenhouse gas or equivalent policy that commits the company to: a. Identifying and measuring greenhouse gas emissions from the mining project; b. Identifying energy efficiency and greenhouse gas reduction opportunities across the mining project; c. Setting meaningful and achievable targets for reductions in absolute greenhouse gas emissions at the mine site level or on a corporate-wide basis; and d. Reviewing the policy at least every five years and revising as needed, such as if there are significant changes to mining-related activities, new technologies become available, or there are newly identified opportunities for reductions.	◔	The site has developed an Environmental policy that includes a commitment to reduce and manage GHG emissions. Even though the policy does not include all the specific IRMA requirements and objectives / targets for reduction, actions and initiatives to reduce energy consumption and GHG emissions have been effectively implemented or planned in harmony with the commitment of GHG reduction established in the environmental policy.
4.5.2.1.	The operating company shall comply with emissions quantification methods described in a widely accepted reporting standard, such as the Greenhouse Gas Protocol Corporate Standard or the Global Reporting Initiative's GRI 305 emissions reporting standard.	◔	The site reports annually its energy consumption in the national register of GHG emissions (electronic platform managed by SEMARNAT and developed by the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ)). In this platform the site reports electric energy (indirect Scope 2) and fuel consumption (transportation, generators, etc. Direct Scope 1). The platform makes the conversion in CO2 equivalents. Currently the site does not exceed the 25,000Tn/year of CO2 eq and therefore is not subject to quantify all GHG emissions and no reduction plan needed according to the Mexican law. However, objectives and projects to reduce energy consumption and hence GHG emissions are in place or planned.
4.5.3.1.	The greenhouse gas policy shall be underpinned by a plan that details the actions that will be taken to achieve the targets set out in the policy.	◔	The site has developed an energy reduction and optimization strategy, including a) Reduction of energy consumption in pick hrs. b) Optimization in crushing operations (which is the area with more energy demand). Other specific projects to reduce energy consumption and therefore indirect GHG emissions include: 1. Replacement of lighting for led 2. New purchasing policy for lighting (only led lamps) 3. Filters replacement and maintenance program reinforce 4. Improvement in water recovery with

			energy reduction 5. Plant turbines (budget approved but waiting for mine acquisition decision) However, it is no clear the link between these projects and initiatives and the impact on the reduction of the GHG emissions
4.5.3.2.	The operating company shall demonstrate progress toward its greenhouse gas reduction targets.	◐	The site has developed energy reduction goals but it is no clear the link between this energy reduction goal and the impact on the reduction of the GHG emissions
4.5.3.3.	The operating company shall demonstrate that it has investigated greenhouse gas reduction strategies, and shall document the results of its investigations.	◔	Studies for other sources of energy with impact in energy reduction and GHG emissions have been carried out, including 1. Solar panels for process plant. Project will imply 534,730 kg annual reduction CO2 eq 2. Micro turbines project to generate energy from mine dewatering. These projects are on hold waiting for mine acquisition decision 3. Voluntary program participation in SEMARNAT initiative participation: 3 projects. In some instances improvement projects driven by cost reduction not always capture the impact in GHG reduction emissions.
4.5.4.1.	The greenhouse gas policy shall be publicly available.	◔	The environmental policy, including the commitment with GHG emissions reduction is posted across the organization, communicated to employees and stakeholders during meetings and available upon request.
4.5.4.2.	On an annual basis, the operating company or its corporate owner shall: a. Disclosure to IRMA auditors an accounting of its greenhouse gas emissions from the mining project; achievement of and/or progress towards mine-site-level greenhouse gas reduction targets; and efforts taken to reduce emissions from the mining project and mining-related activities; and b. Publicly report on mine-site-level or corporate-level greenhouse gas emissions, progress towards greenhouse gas reduction targets and efforts taken to reduce emissions.	◐	There is still no communication strategy for stakeholders. Only the government agency (SEMARNAT) is informed as a legal requirement

Chapter 4.6—Biodiversity, Ecosystem Services and Protected Areas			Basis for rating
4.6.1.1.	Biodiversity, ecosystem services and protected areas screening, assessment, management planning, implementation of mitigation measures, and monitoring shall be carried out and documented by competent professionals using appropriate methodologies.	◔	The specialist appointed to conduct the study is a competent professional registered with the Mexico National Forest Registry, (qualifications for registration include having a professional credential and two years of experience). There are, however, gaps in the methodology as the report is solely focused on terrestrial ecology and does not include aquatic ecology. There is no consideration of ecosystem services.
4.6.1.2.	Biodiversity, ecosystem services and protected areas screening, assessment, management planning, and the development of mitigation and	⊗	

	monitoring plans shall include consultations with stakeholders, including, where relevant, affected communities and external experts.		
4.6.1.3.	Biodiversity, ecosystem services and protected areas impact assessments, management plans and monitoring data shall be publicly available, or made available to stakeholders upon request.	◐	The assessment was not made publicly available, but since it was presented to the government, it could be obtained by third parties upon request.
4.6.2.1.	Critical New and existing mines shall carry out screening or an equivalent process to establish a preliminary understanding of the impacts on or risks to biodiversity, ecosystem services and protected areas from past and proposed mining-related activities.	⊗	
4.6.2.2.	Screening shall include identification and documentation of: a. Boundaries of legally protected areas in the mine's actual or proposed area of influence, and the conservation values being protected in those areas; b. Boundaries of Key Biodiversity Areas (KBA) in the mine's actual or proposed area of influence, the important biodiversity values within those areas and the ecological processes and habitats supporting those values; c. Areas of modified habitat, natural habitat and critical habitat within the mine's proposed or actual area of influence, and the important biodiversity values (e.g., threatened and endangered species) present in the critical habitat areas; and d. Natural ecosystems or processes within the mine's proposed or actual area of influence that may or do provide provisioning, regulating, cultural and supporting ecosystem services.	◐	The EIA did not cover mines, roads and plant, the base line study only was performed for Jales 9. The organization has requested proposals to fulfill these requirements The study for Jales 9 and did not specify all classifications for threaten species, failed to describe potential impact to all receptors, and did not included ecosystems services to communities and changes. Mention is made of the two protected areas 12km and 33km away, but no potential impacts were identified or assessed. The protected areas are in different drainage basins (catchments), so water quality and associated biodiversity impacts on these protected areas were not determined as likely. Dust impact on both areas was not considered.
4.6.3.1.	When screening identifies protected areas or areas of potentially important global, national or local biodiversity or ecosystem services that have been or may be affected by mining-related activities (e.g., KBAs, critical habitat, threatened or endangered species), the operating company shall carry out an impact assessment that includes: a. Establishment of baseline conditions of biodiversity, ecosystem services and, if relevant, conservation values (i.e., in protected areas) within the mine's proposed or actual area of influence; b. Identification of potentially significant direct, indirect and cumulative impacts of past and proposed mining-related activities on biodiversity, ecosystem services and, if relevant, on the conservation values of protected areas throughout the mine's lifecycle; c. Evaluation of options to avoid potentially significant adverse impacts on biodiversity, ecosystem services and conservation values of protected areas, prioritizing avoidance of impacts on important biodiversity values and priority ecosystem services; evaluation of options to minimize potential impacts; evaluation of options to provide restoration for potential and actual impacts; and evaluation of options to offset significant residual impacts (see 4.6.4.1 and 4.6.4.2); and	◐	There was no consideration of dust impacts from Jales 9 on two protected areas located between 12km and 33km away from the site, there was no assurance that the mine would not impact these sites. Also there was no consideration of ecosystem services.

	d. Identification and evaluation of opportunities for partnerships and additional conservation actions that could enhance the long-term sustainable management of protected areas and/or biodiversity and ecosystem services.		
4.6.4.1.	Critical Mitigation measures for new mines shall: a. Follow the mitigation hierarchy of: i. Prioritizing the avoidance of impacts on important biodiversity values and priority ecosystem services and the ecological processes and habitats necessary to support them; ii. Where impacts are not avoidable, minimizing impacts to the extent possible; iii. Restoring biodiversity, ecosystem services and the ecological processes and habitats that support them; and iv. As a last resort, offsetting the residual impacts. b. Prioritize avoidance of impacts on important biodiversity values and priority ecosystem services early in the project development process; c. Be designed and implemented to deliver at least no net loss, and preferably a net gain in important biodiversity values, and the ecological processes that support those values, on an appropriate geographic scale and in a manner that will be self-sustaining after mine closure.	—	It is not applicable because is not a new mine.
4.6.4.2.	At existing mines: a. Where past adverse impacts on important biodiversity values and priority ecosystem services have been identified, the operating company shall design and implement onsite restoration strategies, and also, through consultation with stakeholders, design and implement additional conservation actions to support the enhancement of important biodiversity values and/or priority ecosystem services on an appropriate geographic scale; and b. If there is the potential for new impacts on important biodiversity values or priority ecosystem services (e.g., as a result of mine expansions, etc.), the operating company shall follow the mitigation hierarchy, prioritizing the avoidance of impacts on important biodiversity values or priority ecosystem services, but where residual impacts remain, shall apply offsets commensurate to the scale of the additional (new) impacts.	◐	There are remediation actions from the construction of Jales 9. There is no documentation related to previous remediation efforts. From consultation processes during the current assessment, it was reported by people from communities, that impacts were not remediated to the best possible extent. For Jales 9 there was no study to understand the impact on ecosystem services. Furthermore, activities performed in close relation to communities such as material or personnel transportation were not assessed for risks or impacts to ecosystem services.
4.6.4.3.	Offsetting, if required, shall be done in a manner that aligns with international best practice.	◔	Offsetting to known impacts from Jales 9 construction were being implemented in relation to relocation of animals and plant species. Other impacts were not described in the EIA so offsetting would be impossible to be determined. External (Government) revision of the plans did not find any gaps in the report.
4.6.4.4.	The operating company shall develop and implement a biodiversity management plan or equivalent that: a. Outlines specific objectives (e.g., no net loss/net gain, no additional loss) with measurable conservation outcomes, timelines, locations and activities that will be implemented to avoid,	◐	Plan was not developed with all stipulated IRMA requirements. Points a and b are partially met since not all impacts were properly analyzed. Budgeting was not accessed.

	minimize, restore, enhance and, if necessary, offset adverse impacts on biodiversity and ecosystem services; b. Identifies key indicators, and ensures that there is an adequate baseline for the indicators to enable measurement of the effectiveness of mitigation activities over time; c. Provides a budget and financing plan to ensure that funding is available for effective mitigation.		This is only applicable to Jales 9 EIA and not for the rest of the Site.
4.6.4.5.	Biodiversity management shall include a process for updating or adapting the management plan if new information relating to biodiversity or ecosystem services becomes available during the mine lifecycle.	◐	There is no adaptation to the management plan. Addendums are planned to consider past activities (other than Jales 9) to satisfy IRMA requirements. Those plans were not fully consistent with best international practices. Changes and potential emergency situations were not consistently considered.
4.6.5.1.	An operating company shall not carry out new exploration or develop new mines in any legally protected area unless the applicable criteria in the remainder of this chapter are met, and additionally the company: a. Demonstrates that the proposed development in such areas is legally permitted; b. Consults with protected area sponsors, managers and relevant stakeholders on the proposed project; c. Conducts mining-related activities in a manner consistent with protected d. Implements additional conservation actions or programs to promote and enhance the conservation aims and/or effective management of the area.	—	The mine site or any know activity are not located in a protected area according to the documentation presented.
4.6.5.2.	Critical An operating company shall not carry out new mining-related activities in the following protected areas unless they meet 4.6.5.1.a through d, and an assessment, carried out or peer-reviewed by a reputable conservation organization and/or academic institution, demonstrates that mining-related activities will not damage the integrity of the special values for which the area was designated or recognized. • International Union for Conservation of Nature (IUCN) protected area management category IV protected areas; • Ramsar sites that are not IUCN protected area management categories I-III; and • Buffer zones of UNESCO biosphere reserves.	—	The mine site or any know activity are not located in a protected area according to the documentation presented.
4.6.5.3.	IRMA will not certify new mines that are developed in or that adversely affect the following protected areas: • World Heritage Sites, and areas on a State Party's official Tentative List for World Heritage Site Inscription; • IUCN protected area management categories I-III; • Core areas of UNESCO biosphere reserves.	—	The mine site or any know activity are not located in a protected area according to the documentation presented.
4.6.5.4.	Critical An existing mine located entirely or partially in a protected area listed in 4.6.5.3 shall demonstrate that:	—	The mine site or any know activity are not located in a protected area according to the documentation presented.

	a. The mine was developed prior to the area's official designation; b. Management plans have been developed and are being implemented to ensure that activities during the remaining mine lifecycle will not permanently and materially damage the integrity of the special values for which the area was designated or recognized; and c. The operating company collaborates with relevant management authorities to integrate the mine's management strategies into the protected area's management plan.		
4.6.6.1.	The operating company shall develop and implement a program to monitor the implementation of its protected areas and/or biodiversity and ecosystem services management plan(s) throughout the mine lifecycle.	◐	Monitoring is undertaken for relocation of plant species every 15 days and produces a 6-monthly report. The organization also sends a report every 6 months to the authorities outlining each impact, how it is being mitigated, and the status of such actions. However, as the baseline of species and habitats of concern is incomplete, the monitoring cannot be deemed comprehensive and complete.
4.6.6.2.	Monitoring of key biodiversity or other indicators shall occur with sufficient detail and frequency to enable evaluation of the effectiveness of mitigation strategies and progress toward the objectives of at least no net loss or net gain in biodiversity and ecosystem services over time.	✓	Forestry Services go periodically (15 days approximately.) to monitor key biodiversity indicators determined in the plan. Reports are sent to the authorities. Monitoring was undertaken for relocation of plant species and produces a 6-monthly report. The organization also sends a report every 6 months to the authorities outlining each impact, how it is being mitigated or avoided, and the status of such actions. The authorities undertake inspections of the results of the monitoring reports once a year (was undertaken 3 weeks prior to audit).
4.6.6.3.	If monitoring reveals that the operating company's protected areas and/or biodiversity and ecosystem services objectives are not being achieved as expected, the operating company shall define and implement timely and effective corrective action in consultation with relevant stakeholders.	✓	There were no variables not being met in accordance to legislation. There are gaps to international best practices. However, as baseline of species and habitats of concern is incomplete, the monitoring cannot be deemed comprehensive and complete.
4.6.6.4.	The findings of monitoring programs shall be subject to independent review.	✓	The authorities undertake inspections of the results of the monitoring reports once a year (was undertaken 3 weeks ago). They have a matrix of requirements and actions taken, and they met or exceeded all requirements, including some mitigation actions that were better than required. The authority confirmed compliance with requirements.

Chapter 4.7—Cyanide Management			Basis for rating
4.7.1.1.	Critical If the operating company is eligible to be a signatory to the Cyanide Code, it shall obtain a certification of compliance in accordance with the requirements of the International Cyanide Management Institute (ICMI).	—	Organization is not eligible since they do not produce gold or silver as primary products. Silver is produced and sold as part of concentrate.

4.7.1.2.	If the operating company is not eligible to become a signatory of the Cyanide Code, but the mining project requires the storage onsite of cyanide in bags or bulk containers, or uses cyanide in a mill process, the mine's cyanide management practices shall be: a. Audited against the Cyanide Code's "Gold Mining Operation Verification Protocol" by auditors meeting ICMI requirements; and b. Verified as being generally consistent with Cyanide Code requirements.	⊗	
4.7.1.3.	The operating company shall demonstrate that it has taken steps to ensure that cyanide producers and transporters supplying the mining project are certified as meeting the "Cyanide Production and Transport Practices" of the Cyanide Code.	✓	Organization providing and transporting cyanide are signatory to the ICMI code.
4.7.2.1.	In addition to the requirements of the Cyanide Code, the following design criteria shall be met: a. Impermeable secondary containment for cyanide unloading, storage, mixing and process tanks shall be sized to hold a volume at least 110% of the largest tank within the containment and any piping draining back to the tank, and with additional capacity for the design storm event; and b. Pipelines containing process water (or process solution) shall utilize secondary containment in combination with audible alarms, interlock systems, and/or sumps, as spill control measures.	◐	Secondary containment was observed to be in substandard conditions. There were structural integrity conditions that made general structure unreliable, including, pipe connections to storage tanks, walking surfaces and secondary containment (being repaired). There were no audible alarms. The organization is implementing an improvement plan for the area. Plan is not adequately documented.
4.7.3.1.	Discharges to a surface water mixing zone shall not contain cyanide, either alone or in combination with other toxins, that will that will be lethal to resident aquatic life or interfere with the passage of migratory fish.	—	There is no discharge mixing zone. From the sampling observed cyanide (tot) was observed to be within regulatory limits.
4.7.4.1.	The operating company shall carry out baseline water quality sampling and monitor discharges to surface waters or groundwater for weak acid dissociable (WAD) cyanide.	⊗	
4.7.4.2.	If WAD cyanide is detected in discharges to surface waters, then the operating company shall also monitor total cyanide, free cyanide, and thiocyanate levels.	—	The organization does not monitor WAD.
4.7.5.1.	Cyanide water quality monitoring data shall be published on at least a quarterly basis in tabular format, and graphical format if available, on the mine or the operating company website, or provided to stakeholders upon request.	⊗	
4.7.5.2.	If the operating company is a Cyanide Code signatory it shall include in its annual report or sustainability report a link to the company's audit information and corrective actions published on the ICMI website.	—	Not signatory to ICMI.

Chapter 4.8—Mercury Management		Basis for rating
Chapter Not Relevant	—	No thermal processes used that have the potential to release mercury.

Endnotes

[1] Estudio Hidrogeologico Mina Carrizal (Carrizal Mine Hydrogeological Study). Murillo & Colon Consultores. May 2019

[2] ibid.

[3] ibid.

[4] ibid.

[5] ibid.

[6] http://www.Zimapán.gob.mx/descargables/presidencia/transparencia/4fraccionIV/17.pdf

[7] http://www.microrregiones.gob.mx/zap/Economia.aspx?entra=nacion&ent=13&mun=084

[8] http://www.microrregiones.gob.mx/zap/rezago.aspx?entra=nacion&ent=13&mun=084

[9] http://www.microrregiones.gob.mx/zap/poblacion.aspx?entra=nacion&ent=13&mun=084

[10] Carrizal operations Closure and reclamation plan 22Sep2019

[11] https://tools.responsiblemining.net/self-assess/

[12] All versions will be posted on the IRMA website: https://responsiblemining.net/. The most recent version (IRMA Certification Body Requirements, v.1.0) is available at: https://responsiblemining.net/wp-content/uploads/2020/01/Certification-Body-Requirements_v1.0.pdf

[13] See IRMA Certification Body Requirements, v.1.0, pp. 18-19, and Annex A. https://responsiblemining.net/wp-content/uploads/2020/01/Certification-Body-Requirements_v1.0.pdf

[14] See IRMA Certification Body Requirements, v.1.0, p 32. https://responsiblemining.net/wp-content/uploads/2020/01/Certification-Body-Requirements_v1.0.pdf

[15] IRMA website: "Complaints and Feedback." https://responsiblemining.net/what-you-can-do/complaints-and-feedback/

[16] IRMA Issues Resolution System Procedure. Verson 1.0. January 2020. https://responsiblemining.net/wp-content/uploads/2020/03/IRMA-Issues-Resolution-System_2020.pdf

[17] IRMA web site "Mines Site Assessments": https://responsiblemining.net/what-we-do/certification/mines-under-assessment/

Carrizal mine's Responsible Mining Map profile: https://map.responsiblemining.net/site/62