INTERNATIONAL CYANIDE MANAGEMENT INSTITUTE

2020 Report: The Value of Certification

Contents:

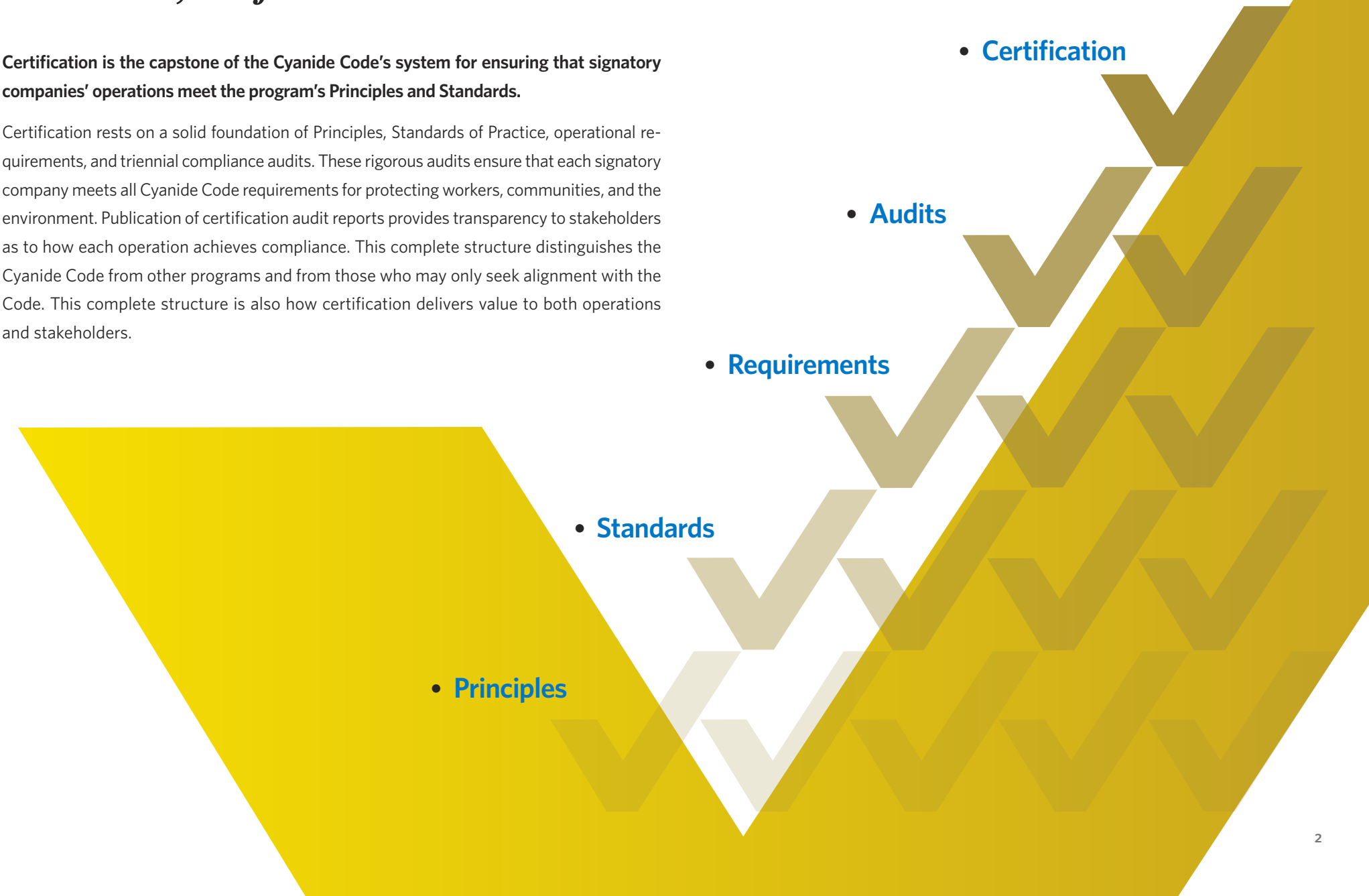
ode = the cyanide code = th
code = the cyanide code = th
e code = the cyanide code = th
le code = the cyanide code = the

The Cyanide Code:

Structure, *not just* standards

Certification is the capstone of the Cyanide Code's system for ensuring that signatory companies' operations meet the program's Principles and Standards.

Certification rests on a solid foundation of Principles, Standards of Practice, operational requirements, and triennial compliance audits. These rigorous audits ensure that each signatory company meets all Cyanide Code requirements for protecting workers, communities, and the environment. Publication of certification audit reports provides transparency to stakeholders as to how each operation achieves compliance. This complete structure distinguishes the Cyanide Code from other programs and from those who may only seek alignment with the Code. This complete structure is also how certification delivers value to both operations and stakeholders.



• Principles

1/ **Production**
Use cyanide only from certified producers that have met the Cyanide Code's high standards for safety and environmental protection.

2/ **Transportation**
Receive cyanide transported in compliance with rigorous safety and emergency response standards.

3/ **Handling & Storage**
Handle and store cyanide in a manner that best protects workers, communities, and the environment.

4/ **Operational Use**
Safely manage cyanide process solutions and waste streams.

5/ **Decommissioning**
Develop thorough plans for decommissioning cyanide facilities.

6/ **Worker Safety**
Protect workers from exposure to cyanide.

7/ **Emergency Response**
Prepare to act with well-tested and coordinated emergency response strategies and capabilities.

8/ **Training**
Equip workers and first-responders with tools and knowledge for managing cyanide safely.

9/ **Dialogue**
Engage in public consultation and disclosure on cyanide management at operations.

• Standards

31 auditable Standards of Practice for mining operations

• Requirements

Defined requirements for achieving each specific standard

• Audits & Certification

Every 3 years, independent, third-party auditors verify compliance and certify each participating operation

• Transparency

All audit reports (including specific findings and any Corrective Action Plans) are **publicly available** on the Cyanide Code website

2020 Highlights:

The Code *in action*

195
Cyanide Code Signatories

349
Global participants
- 290 fully certified

65
Audit reports received in 2020
Companies engaged 27 qualified lead auditors, from 20 firms, assisted by 22 technical experts

105
Certified Mines

77%
of participating Mining Operations certified

49
Countries using Cyanide Code
- Certified Operations in 42 countries

76
Certified Supply Chains

83%
Signatories with Certified Operations

76
Operations Certified in 2020
Mining 19 / Producers 16 / Transporters 41

77%
of Certified Operations *recertified*
Mining 83% / Producers 85% / Transporters 71%

To Our Stakeholders:

With the challenges we met and the progress we made, 2020 was a landmark year for the Cyanide Code.

The industry's response to the pandemic was remarkable. Around the world, companies kept operations going while maintaining the Cyanide Code's rigorous requirements. On March 12, 2020, ICMI anticipated COVID-19's potential impact on audit deadlines and enabled signatories to request extensions due to travel restrictions and health concerns. Although COVID-19 continues to affect audits, we have seen increases in audits scheduled, audits conducted, and the number of audit reports we have received.

We reached a new high for Cyanide Code participation. We welcomed five mining companies during the year: AK Altynalmas JSC, Asanko Gold Ghana Limited, Evolution Mining's Red Lake Operation, and Tumad Mining, Inc. Already in 2021, we have welcomed four additional mining companies: PT Indotan Halmahera Bangkit, Minera San Julián S.A. de C.V. Nampala SA, and Torex Gold Resources. These gains plus new cyanide producer and transport signatories have brought the total number of participating companies to 202. This is especially notable as mergers and acquisitions continue to reshape the mining industry, and we anticipate further growth during 2021.

We updated and strengthened the Cyanide Code's 19 supporting documents. This was a substantial undertaking for us, and one that will support audits and compliance for at least a decade. Our Senior Vice President, Eric Schwamberger, oversaw this effort and his efforts were considerable. We bolstered soft spots, accounted for industry changes and improved guidance and procedures that ICMI's 14 years of reviewing audit reports revealed were not always clear to auditors or operations. We also consolidated material and developed a new guidance document for production operations. ICMI's Board of Directors approved the revisions and we posted them on our website in June 2021.

A Landmark Year.

Looking back at 2020, we saw the value of Cyanide Code certification confirmed in so many ways, for so many stakeholders.

That's the focus of this annual report.

We believe...

The value of Cyanide Code certification is supported by the data.

Our experience is that participants and stakeholders value the Cyanide Code's complete certification structure, with certification resting on a solid foundation of Principles, Standards of Practice, operational requirements, and triennial compliance audits. This complete structure is how the Cyanide Code distinguishes itself from non-certification programs and from those who state they "align" or otherwise comport with the Code. This complete structure, through its rigor and transparency, is also how value is delivered to both operations and stakeholders. Rigorous independent third-party audits ensure that the bedrock Principles, Standards of Practice, and detailed requirements are achieved, and publication of certification audit reports provides transparency to all stakeholders as to how an operation achieves the necessary requirements for protection of workers, communities, and the environment.

We believe the value of Cyanide Code certification is supported by the data. In this annual report, you will see the 47 gold mining companies participating in the program with their 136 participating mining operations. This level of participation is more than double the companies or operations participating in any other industry initiative. You will also see the 42 mining operations that have now been audited and certified four times. If certification did not have bottom-line value, these companies and operations would not invest in such a rigorous commitment. The value of the Cyanide Code is increasingly recognized by governments: most recently Turkey made statements supporting the Cyanide Code.

This report is also a snapshot of where the industry stands today, and the signals we see in audit reports of where it is heading. We are proud of our accomplishments, and even prouder of the accomplishments of the hundreds of operations around the globe that are implementing the Cyanide Code and validating their performance through independent third-party evaluation. We hope you enjoy reading and invite you to share your thoughts or suggestions with us at **info@cyanidecode.org**.

I would also like to thank all ICMI board members, past and present, and my colleagues at ICMI for their deep commitment in supporting the best interests of all our stakeholders through the years.

Clearly, the leadership of so many has shaped the Cyanide Code's success. In the coming years, we will continue to see the reach of the Cyanide Code expand as more companies and operations realize the value of certification and implement the Code across their operations to protect workers, communities, and our world.

Paul Bateman
President

Since the Cyanide Code started, the International Cyanide Management Institute has overseen *921 certifications*.

What's *the value?*

Why have so many operations invested such significant effort and money to attain certification?

Why do they commit to *re*certification?

The answer:

Certification has *tangible value.*

Mines, producers and transporters, governments, workers, insurers/lenders, investors, and communities describe what certification means in different ways: Strong leadership. Responsible operations. Environmental stewardship. Safe working conditions. **But they all agree on the value of certification.**

Certification is proof that companies stand at the forefront of their industry, meeting international standards of best practice and harnessing lessons learned, industry trends, and new practices to protect people, the environment, operations and the future.

How different stakeholders describe the value of Cyanide Code certification:

Mines
Performance standards help minimize incidents and their consequences. Rigorous certification requirements facilitate safe operating conditions, ISO compliance and regulatory compliance.

Producers & Transporters
Compliance strengthens companies' ability to manage cyanide safely throughout the supply chain.

Governments
Cyanide Code standards both complement and supplement governments' safety, health and environmental regulations and laws.

Workers
Workers benefit from training, risk mitigation practices, safe conditions and effective emergency response—no matter where their operations are located.

Insurers, Lenders, Investors
Access to posted audit reports helps assess operational leadership and risk management.

Communities
The Cyanide Code helps protect people, communities, and the environment. It requires rapid, effective response to any incident.

- Helisangela Alencar
Senior Manager, Safety & Sustainability Audit
Kinross Gold Corporation
Toronto, Canada

Value Perspective:

The Code provides *assurance.*

"Kinross is proud to be one of the original signatory companies to the Cyanide Code.

Since 2005, all of our sites have been through multiple cycles of certification, and we continue to see value in the certification process — not only does regular external assurance help keep us on top of our game, it helps give our stakeholders confidence that cyanide is being safely and transparently managed at our operations in the Americas, West Africa, and Russia."

Auditor

- Tom Gibbons
Veritas Metallica Pty Ltd
Western Australia

"I have been involved with the Cyanide Code since its inception; initially as a Mining Operator, and for the last 10 years as an Auditor and Technical Advisor.

I have observed many benefits of Code certification. First and foremost is the demonstration of leadership to all stakeholders of an unwavering commitment to safe and responsible cyanide management, thereby ensuring protection of human health, wildlife, and the environment. Code certification increases credibility with regulators, investors, communities, employees, business partners, and other stakeholders.

There are tangible bottom-line benefits of the Code, including significant reductions in reagent costs resulting from the Code's high standards of process and metallurgical control within leaching circuits. There have also been many innovations and developments in cyanide management since the inception of the Code, as Operations have found more efficient and effective means to meet Code standards of practice.

When I visit Operations, many Superintendents and Senior Supervisors tell me that the discipline, information management and technical verification techniques required to maintain certification has provided them with a framework they have applied to other areas of operational management. This to me is an indication that the Code is both practical and well-accepted in the field, and that application of the Code is seen as an example of industry best practice in operational management.

I see both a strong focus on compliance and certification at all levels of a Signatory Mining Company, and an intense pride when certification is achieved and maintained."

Value Perspective:

The Code is an example of industry *best practice* in operational management.

- Émerson Garcia
Civil Defense Coordinator of Paracatu
Brazil

Value Perspective:

Simulations involving the Cyanide Code are conducted with great *responsibility and care.*

"It is extremely gratifying to participate and coordinate the Civil Defense in Paracatu, given the interaction we have with the companies participating in the MAP (Mutual Aid Plan).

This important work is geared towards the well-being of the community. The synergy we have with the companies facilitates our work in ensuring all our simulations, such as those of dams and others focused on the Cyanide Code, are conducted with great responsibility and care.

I have always had full access to the safety information that the company has in place. Specifically with cyanide, I have been able to understand all the existing monitoring since the arrival of this product, which is approved by the Brazilian Army, and stored in a safe location until its application, product breakdown, and final disposal in specific tanks, which are lined and sealed after its final use."

2020:

A Certification year like *no other.*

COVID-19 challenged operations and audits. While the pandemic affected many mining operations worldwide, Code signatory companies remained accountable. They maintained compliance and achieved certification despite reduced workforces, temporary closure of some mining operations and restrictions on transportation which affected cyanide supply to some operations.

Timely intervention on audit scheduling and extensions

Early in the outbreak, ICMI anticipated that COVID-19 restrictions could delay the onsite portion of certification audits, making it difficult to complete audits by their original due dates. By March 12, 2020, ICMI had issued guidance and allowed signatories to request audit date extensions.

Working closely with signatories

ICMI worked with both operations and lead auditors to determine when an extension to a required audit date was necessary, and the length of the extensions. This communication also enabled us to gauge the state of travel restrictions in different countries so we could anticipate the need for additional extensions. Some operations were able to complete their audits well before their extensions expired.

Travel restrictions and health concerns

Although travel restrictions and health concerns limited acess to operations and availability of auditors, audits continued to be conducted during the pandemic. These audits were conducted primarily in areas where auditors were available locally, without crossing international borders or having long quarantine periods.

Audit Date Extensions, *March 12 – December 31*

49
Requested

47
Granted

- 13 Mining
- 6 Production
- 28 Transport

Cyanide Code Document Review and Revision:

New information *and* lessons learned

In 2020, ICMI completed its comprehensive review/update of the Cyanide Code's library of supporting documents. The goal was to remove duplication, make documents clearer and easier to use, and incorporate practical insights gleaned from years of audits and ICMI's review of over 900 audit reports.

The updated library is designed to continue to provide participating companies, operations and auditors with:

- Concise guidance preparing for certification
- Clear expectations for conducting audits and reporting results
- Practical guidance based on auditors' onsite experiences and observations

Program document updates represent 14 years of real-world knowledge and practices for managing cyanide safely.

2019

ICMI initiates comprehensive review of the Cyanide Code's supporting documents

2020

Drafts of revised documents shared via the Cyanide Code website
Comments invited from signatory companies and general public

112 comments received for improvement of documents
Final revised documents approved by ICMI's Board of Directors

2021

Translation of documents into Spanish, French and Chinese
Updated library of program documentation published in June 2021

Cyanide Code Document Review and Revision:

What has *and hasn't* changed

1 *New* Document

Guidance for Use of the Cyanide Production Verification Protocol

11 Program Documents *with* Substantial Revision

In the review and revision process, substantial revisions were made to:

1. The Cyanide Code
2. Signatory and Certification Process
3. Signatory Application Form
4. Definitions and Acronyms
5. Auditor Criteria
6. Mining Operations Verification Protocol
7. Guidance for Use of the Mining Operations Verification Protocol
8. Cyanide Transportation Verification Protocol
9. Guidance for Use of the Cyanide Transportation Verification Protocol
10. Cyanide Production Verification Protocol
11. Guidance for Use of the Cyanide Production Verification Protocol *(new document)*

7 Documents *with* No Substantial Revision

These documents were reviewed, but required no substantive revisions:

1. Dispute Resolution Procedure
2. Request for Mediation Form
3. Auditor Credentials Form
4. Summary Audit Report Format for Mining Certification Reports
5. Summary Audit Report Format for Production Certification Reports
6. Summary Audit Report Format for Transportation Certification Reports
7. Corrective Action Plan Requirements

5 Documents Removed

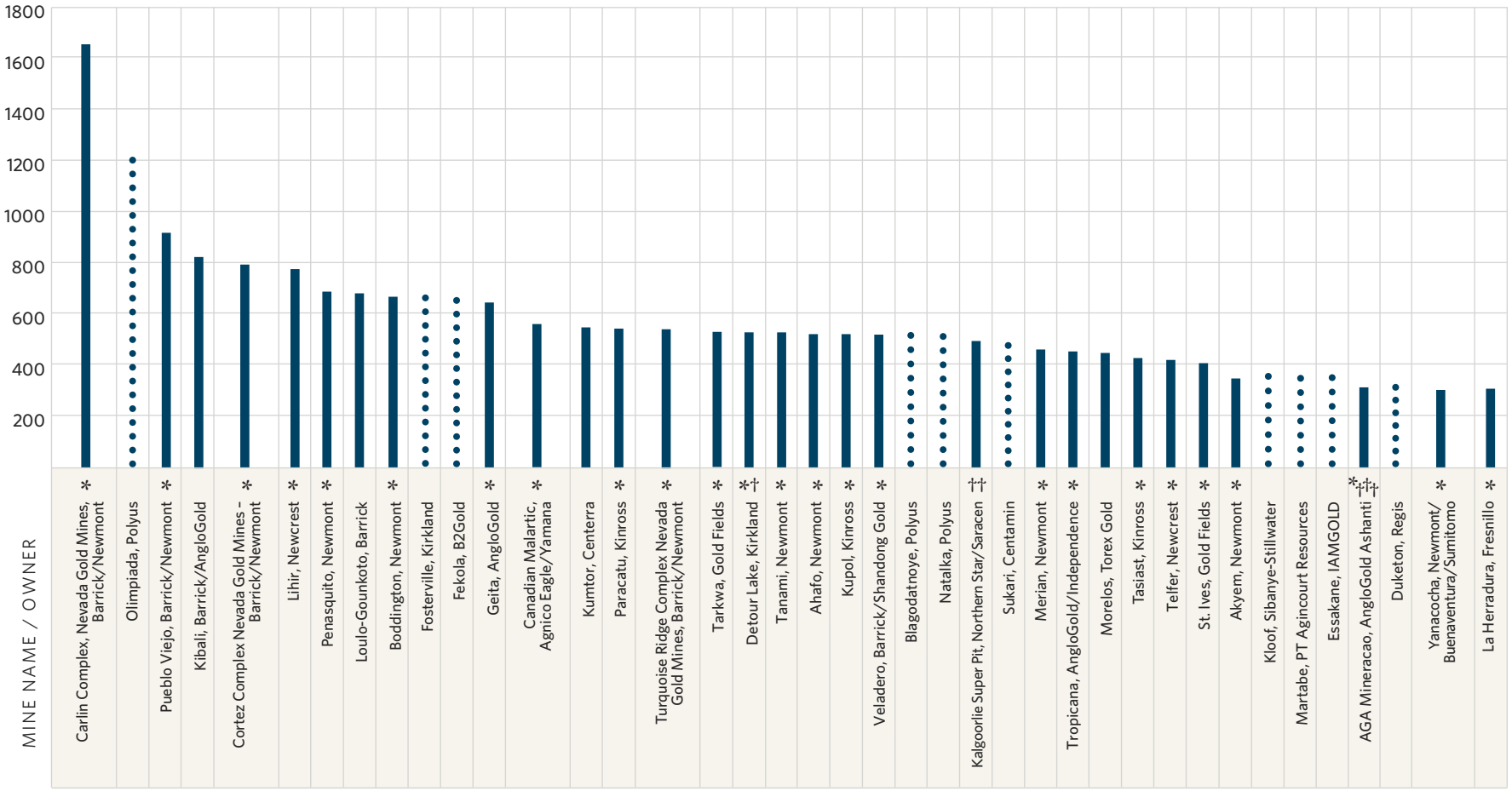
The review and revision process also included consolidation of documents that included large amounts of information that was similar or identical to information contained in other documents. As a result of this consolidation, these documents are being retired and removed from ICMI's document library, as follows:

1. Recertification Guidance
2. Mining Pre-operational Verification Protocol
3. Production Pre-operational Verification Protocol
4. Transportation Pre-operational Verification Protocol
5. Implementation Guidance

Leading Gold Mines using Cyanide *in 2020*

Annual Gold Production in 1000 ounces

2020 gold production compiled by ICMI from various sources; list excludes operations majority-owned by governments.

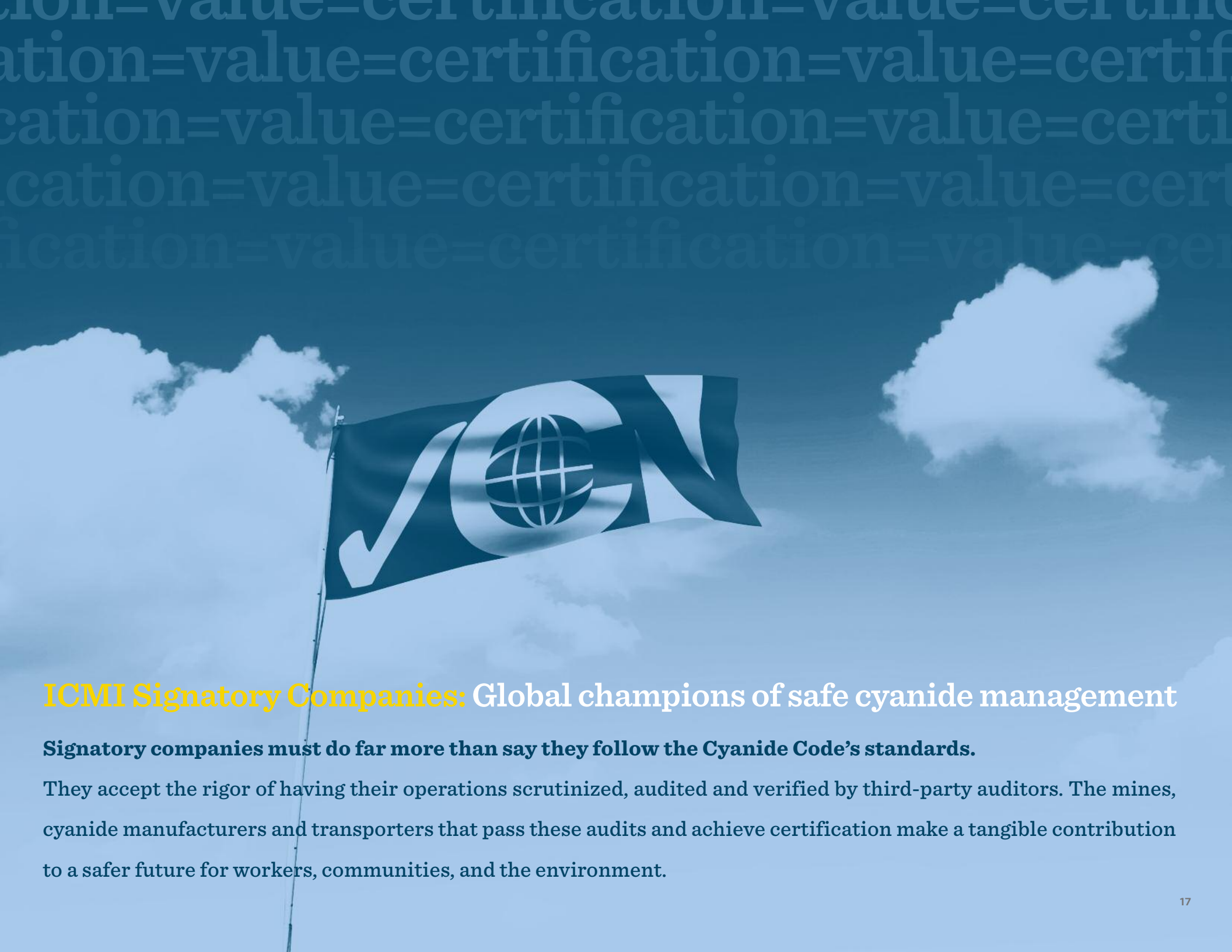


▬ Participant Operation in Cyanide Code ••• Non-Participating Operation in Cyanide Code ✻ Certified Operation(s)

† The signatory/certified operation Detour Lake was acquired by the non-signatory Kirkland Lake in January 2020.

†† The certified operation Kalgoorlie was acquired from signatories Newmont and Barrick by non-signatories Northern Star and Saracen in 2019 and 2020.

††† Includes three certified gold plants: Córrego do Sitio I & II and Querioz.



ICMI Signatory Companies: Global champions of safe cyanide management

Signatory companies must do far more than say they follow the Cyanide Code's standards.

They accept the rigor of having their operations scrutinized, audited and verified by third-party auditors. The mines, cyanide manufacturers and transporters that pass these audits and achieve certification make a tangible contribution to a safer future for workers, communities, and the environment.

The International Cyanide Management Institute salutes these global champions of safety and environmental protection.

Mining Companies

Agnico Eagle Mines Limited, Canada
AK Altynalmas JSC, Republic of Kazakhstan
Anaconda Mining Inc., Canada
AngloGold Ashanti, South Africa
Asanko Gold Ghana Limited, Ghana
Auplata S.A., French Guiana
Aura Minerals Inc., Canada
Barrick Gold Corporation, Canada
Belo Sun Mining Corporation, Canada
Boroo Gold, LLC, Mongolia
Centerra Gold Inc., Canada
Columbus Gold Corp., Canada
Compagnie Minière Montagne d'Or, France
Detour Gold Corporation, Canada
Dundee Precious Metals Inc., Canada
Eldorado Gold Corporation, Canada
Equinox Gold Corp., Canada
Evander Gold Mining Limited, South Africa
Evolution Mining (Cowal) Pty Ltd, Australia
Evolution Mining - Red Lake Operation, Canada
Gabriel Resources Ltd., Canada
Gold Fields Limited, South Africa
Golden Queen Mining Company, LLC, United States
Golden Star Resources Ltd., Canada
Gorubso-Kardzhali PLC, Bulgaria
Haile Gold Mine, Inc., United States
Harmony Gold Mining Company Ltd, South Africa
Kingsgate Consolidated Limited, Australia
Kinross Gold Corporation, Canada
Lydian International Limited, United States
Ma'aden Gold & Base Metals Co., Saudi Arabia
Marigold Mining Company, United States
Minas Argentinas S.A., Argentina
Minera Penmont S de R.L. de C.V., Mexico
Minera Sotrami S.A., Peru
Minera Yanaquihua S.A.C., Peru
New Gold Inc., Canada
Newcrest Mining Ltd, Australia
Newmont Corporation, United States
PanAust Limited, Australia
Polymetal International PLC, Cyprus
PT J Resources Nusantara, Indonesia
SORED-MINES S.A., Senegal
Troy Resources Guyana Inc., Guyana
TUMAD Madencilik Sanay Ve Ticaret A.S., Turkey
Wharf Resources (USA) Inc., United States
Yamana Gold, Canada

Cyanide Manufacturers

Anhui Anqing Shuguang Chemical Co., Ltd., P.R. China
Arabian Petrochemical Company (PETROKEMYA), Saudi Arabia
Asahi Kasei Corporation, Japan
Australian Gold Reagents Pty Ltd., Australia
The Chemours Company, United States
Closed Joint Stock Company Korund-CN, Russia
Cyanco, United States
CyPlus, Germany
CyPlus Idesa S.A.P.I. de C.V., Mexico
Hebei Chengxin Co., Ltd., P.R. China
Hindusthan Chemicals Company, India
JSC Rustavi Azot, Georgia
Lucebni zavody Draslovka a.s. Kolin, Czech Republic
Orica Australia Pty Ltd., Australia
Saratovorgsintez LLC, Russia
Sasol South Africa (Pty) Limited, South Africa
TaeKwang Industrial Co., Ltd., Republic of Korea
Talas Investment Company, Republic of Kazakhstan
Tongsuh Petrochemical Corporation, Ltd., Republic of Korea
UPL Limited, India

Signatory Companies

The Cyanide Code's *value* continues to increase

We continue to see growth from the mining sector, especially from operating companies rather than mine development companies. In 2020, ICMI welcomed four mining signatories with producing operations in Turkey, Ghana, Kazakhstan, and Canada. Five mining companies departed the program, due to acquisitions by other signatory companies, cessation of mining or mine development, and in one case, failure to meet standards for certification. By early 2021, that net loss was erased and growth had resumed.

Signatory Locations in 2020

No major changes in the number or geographical distribution of signatories

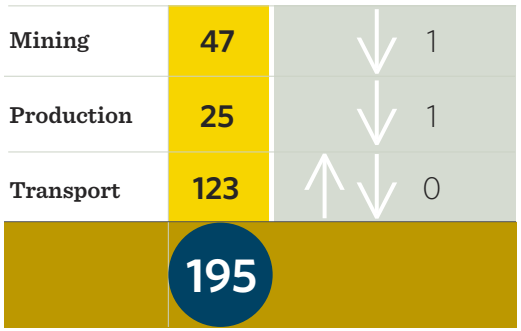
	Europe	Asia	North America	South America	Oceana	Africa
Mining	5	5	23	5	4	5
Production	5	9	2	4	2	3
Transport	5	19	21	41	8	29
Total	**15**	**33**	**46**	**50**	**14**	**37**

North America continues to house the *most mining signatories.*

South America hosts the *most total signatories* because of its *high number of transport signatories.*

Total Signatories in 2020

Reflecting mining company consolidations and frequent changes to transport contracts



Duration of Certification

	Signatory	Designated	Certified	% Certified	Avg Duration (years)
Mining	47	136	105	77%	8.67
Production	25	38	33	87%	8.50
Transport	123	175	152	87%	6.21
Total	**195**	**349**	**290**	**83%**	

Certified Operations

Doing so much to protect so many

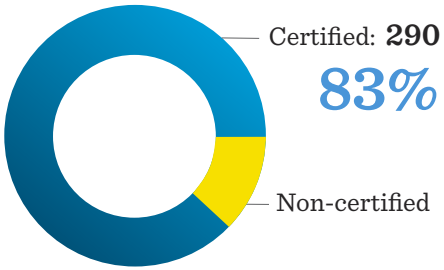
It's one thing to set up a standard. It's another for companies to follow it. The Cyanide Code certification structure challenges signatory companies not only to follow the Code, but also to be audited to prove compliance.

For 15 years, mining companies and cyanide producers and transporters have met that challenge. The value of their commitment to certification can be measured by the facilities, systems, emergency response, and daily management activities, such as inspections that have done so much to protect so many workers and communities around the world. In the process, certified operations have also found that complying with such rigorous standards can be an asset in everything from stakeholder relations and confidence in securing loans, to fast-tracking successful mergers and acquisitions.

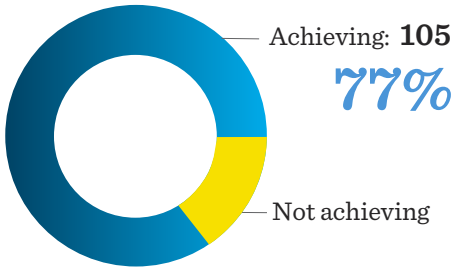
Operations Certified in 2020

		# of Initial Certifications
Mining	**19**	3
Production	**16**	4 *(2 pre-operationally certified)*
Transport	**41**	11 *(3 pre-operationally certified)*
Total	**76**	

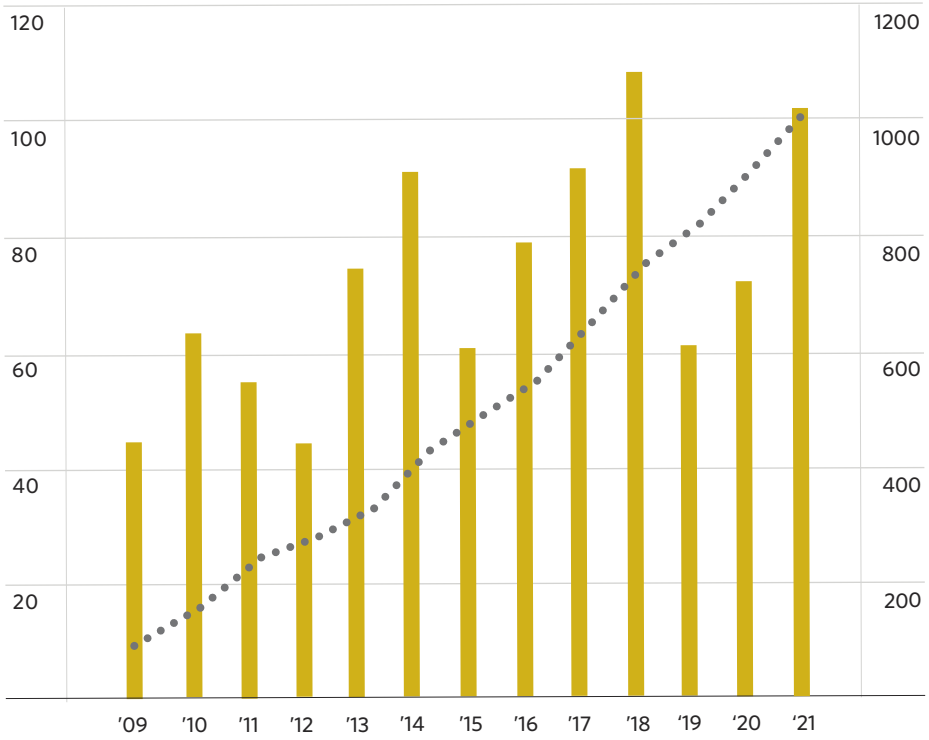
Total Participating Operations: **349**



Mines Designated for Certification: **136**



Certifications by Year & Cumulative, 2009 – 2021 projected



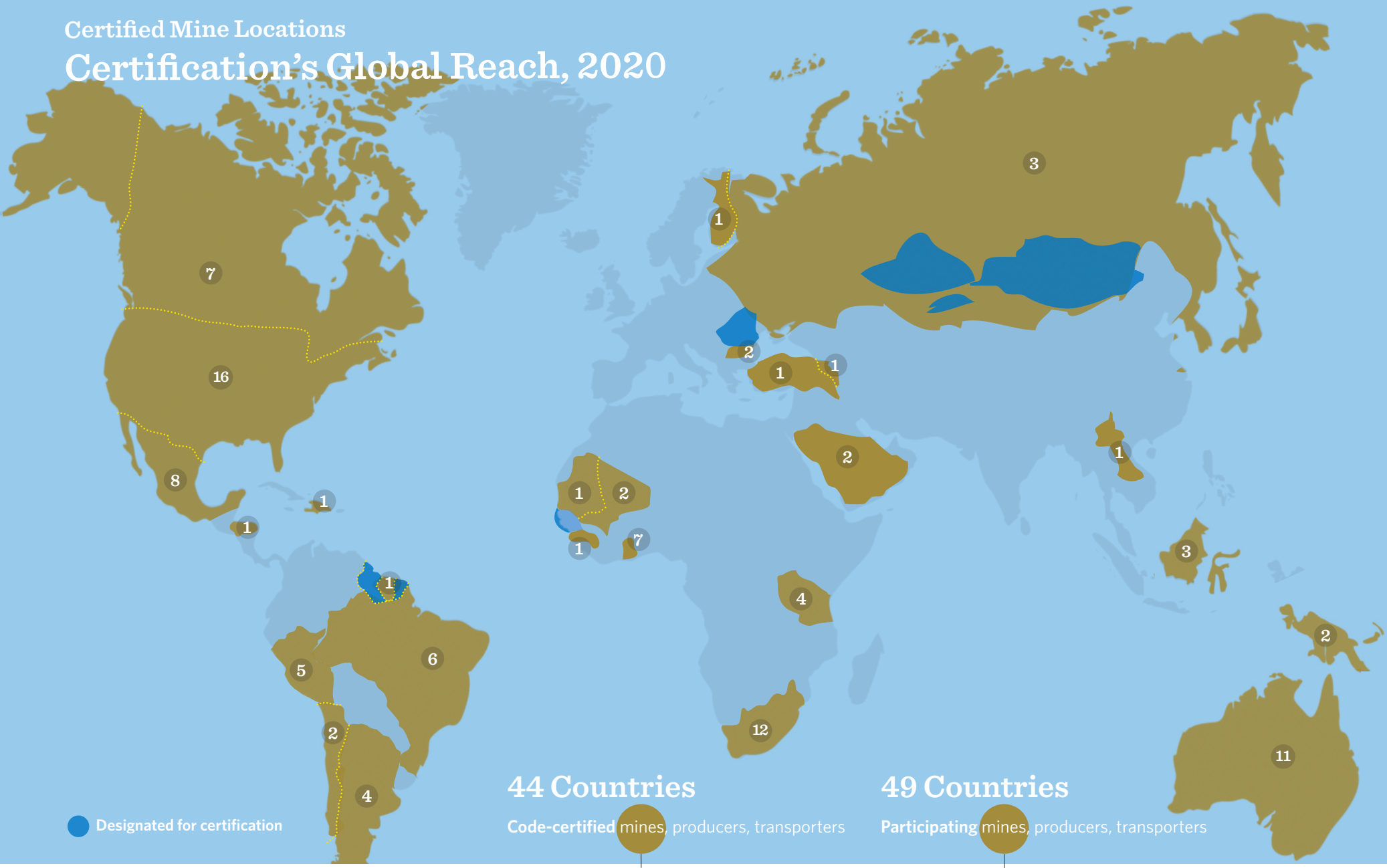
Certifications:

1,000
Anticipated
in the second half of 2021

921
Cumulatively Achieved
over the past 14 years

Certified Mine Locations

Certification's Global Reach, 2020



44 Countries

Code-certified mines, producers, transporters

26

49 Countries

Participating mines, producers, transporters

33

The Cyanide Code provides a consistent and rigorous set of international cyanide management standards for protecting workers, communities, and the environment.

Recertified Operations

Stability: *the value* of staying certified

Mining companies, producers and transporters that recertify are *the gold standard for excellence.*

Of the 19 mining operations certified during 2020, 16 (84 percent) were for recertification. Passing a rigorous audit every three years demands an uncompromising commitment to safety across every operational area, every day. The result is gold-standard cyanide management that protects workers, community, wildlife and corporate stability and value—year after year. Their longevity in the program also contributes to the long-term stability of their companies and stature in the industry.

Longevity of Certification

	1st	2nd	3rd	4th	5th	6th	7th	Avg Duration (years)
Mining	18	18	27	33	8	0	1	8.67
Production	5	6	11	3	8	0	0	8.50
Transport	44	45	45	15	3	0	0	6.21
Total	**67**	**69**	**83**	**51**	**19**	**0**	**1**	

77%
of all certified operations are *recertified*

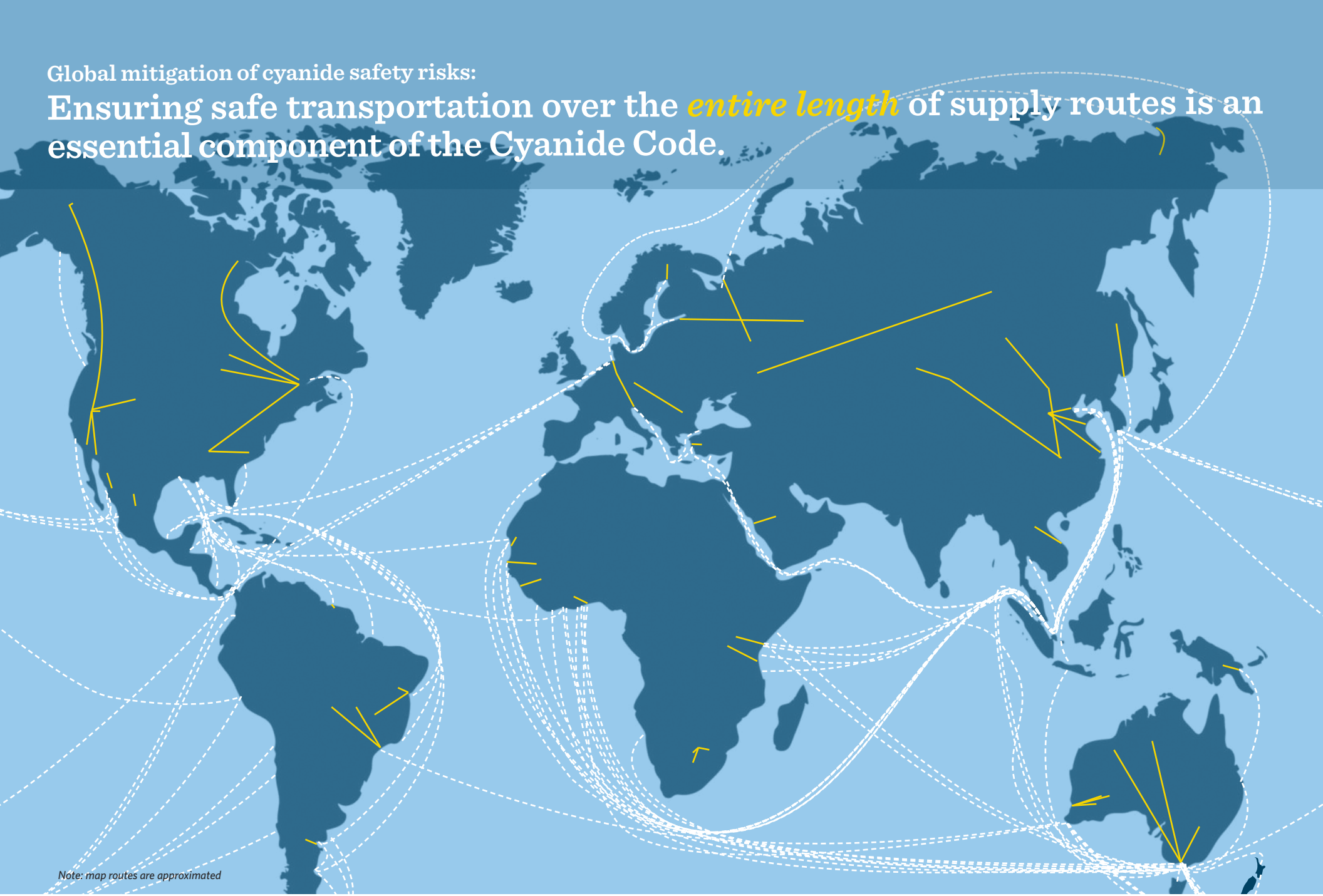
83% Mining
85% Production
71% Transport

71 Operations certified ***4X***

20 Operations certified ***5X*** ***or more***

Global mitigation of cyanide safety risks:

Ensuring safe transportation over the *entire length* of supply routes is an essential component of the Cyanide Code.



Note: map routes are approximated

The Cyanide Code requires end-to-end safe management and best practices, even when supply routes stretch thousands of miles and extend across oceans and continents. Because certified operations comply with these rigorous requirements, cyanide travels more safely. This rewards mines with fewer incidents and delays while offering safeguards that benefit even jurisdictions without mining operations.

Signatories agree to follow the Cyanide Code.

Audits verify *and* document their compliance

The Cyanide Code's rigor sets it apart from other industry programs.

Standards:
The performance levels that must be achieved for compliance

Independent Audits:
The validation that compliance has been achieved

Certification:
The value that compliance creates for every stakeholder

Website:
The transparency of where companies stand and why

The *only path* to Cyanide Code compliance is through the audit.

From safeguarding health —and lives— to protecting the environment, the stakes for managing cyanide safely are high. So are the standards set for certification and for the audits themselves. Every three years, independent, professional auditors go onsite to mines, producers and transporters. They interview personnel, inspect operations and review records and documentation. Companies, governments, workers and communities trust the rigor of the audit process, they trust that certification has genuine meaning.

ICMI adds further rigor to the certification process. For quality assurance, ICMI conducts a "Completeness Review" on all submitted audit reports to confirm that sufficient details are provided to support the auditor's findings and that they are consistent with the Cyanide Code's expectations. This also provides consistency between certifications made by different auditors at different operations owned by different companies and operating in different countries and in different environments. ICMI publishes these reports on the Cyanide Code website.

Expertise the industry can trust.

To make sure certification matters, ICMI validates auditors' qualifications, independence and adherence to the highest ethical standards. Approved auditors are placed on a list from which signatories can choose a professional who is the best match for their operations.

In addition to ICMI approval, Lead Auditors' credentials must include:

Certification as an environmental, health or safety auditor or environmental, health or safety management systems auditor with expertise above the entry or provisional level.

—

Adherence to the Code of Ethics of the organization certifying the auditor.

—

Certification by an organization having a system to revoke auditor credentials if the auditor is found to have conducted an audit in an unethical or unprofessional manner.

—

Up-to-date compliance with requirements necessary for maintaining certification.

Approved Audits Reports in 2020

116 ↑8 from 2019

65 audit reports submitted in 2020

for audits conducted by
27 auditors with lead auditor credentials
(representing 20 firms)
plus an additional **22 technical auditors.**

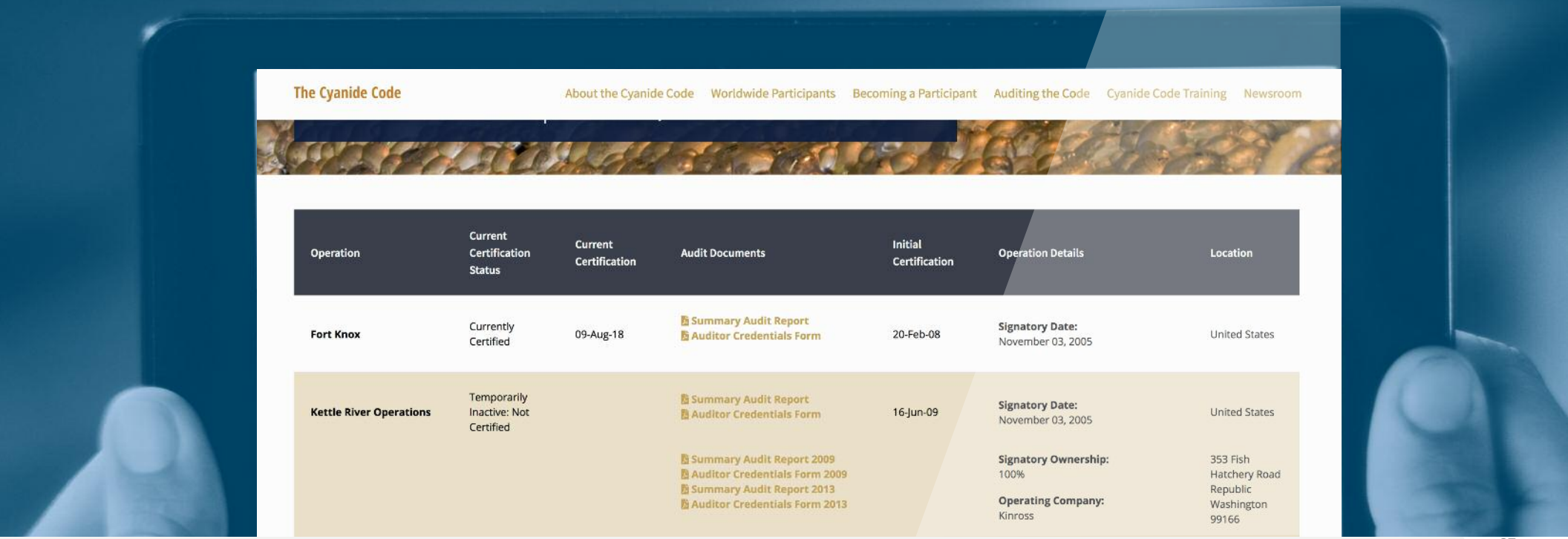
Increasingly, Cyanide Code Audit Reports are being used by lenders, investors, insurers, and regulators. The reports provide insights as to how companies manage cyanide and respect their workers, communities, the environment and relationships with local, national and international regulatory bodies. ICMI's audit report review also provides transparency into companies' operations and insights into the latest industry improvements, best practices and operational trends.

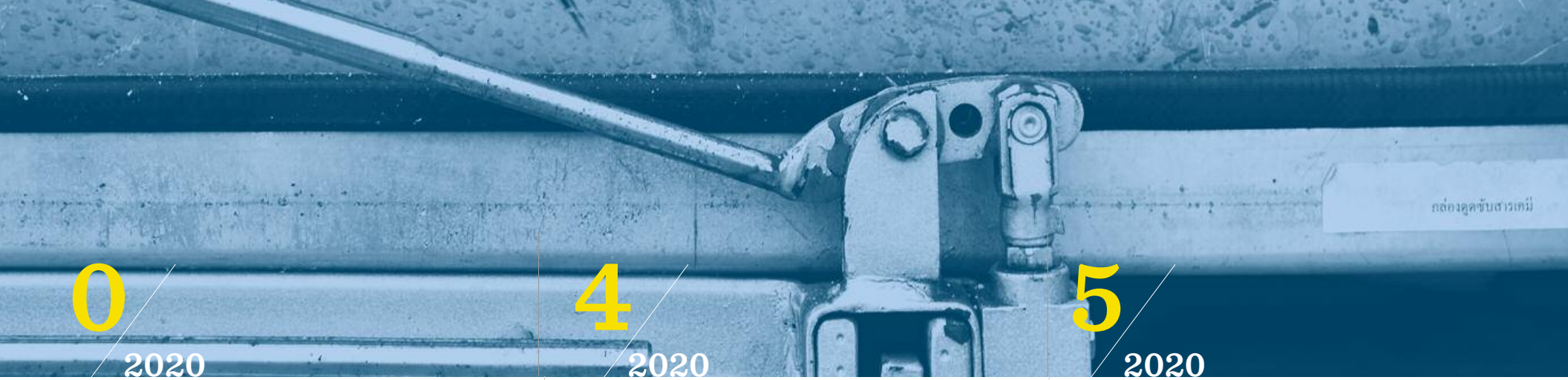
Over 900 Cyanide Code audit reports offering expert and unbiased examinations of signatory mining, production and transportation companies are **available to the public at cyanidecode.org.**

Public audit information includes:

- Environmental & Safety Practices
- Physical Facility Operations & Management
- Inspections & Recordkeeping
- Training
- Emergency Response
- Risk Communication
- Financial Assurance & Corporate Management

2020 Trend: Audit Reports as *discovery* tools





0
2020

4
2020

5
2020

Non-compliance

Auditors found no operations non-compliant in 2020. Non-compliance with the Cyanide Code can be triggered by issues such as deficiencies in operational practices or in documentation or failing to complete regular certification audits by the deadline. An operation found non-compliant with the Cyanide Code's Principles and Standards of Practice cannot be certified. Non-compliance at an already certified site would result in its de-certification, and de-certification of the operation would be posted on the Cyanide Code website.

Substantial Compliance

Two mining operations, one truck transporter, and one transport supply chain were found in substantial compliance in 2020. To be substantially compliant, rather than non-compliant, an operation must be able to correct any deficiencies within one year, the deficiencies must not present an immediate risk to health, safety, or the environment, and the operation must have made a good-faith effort to correct any deficiencies prior to the audit. To provide full transparency to stakeholders, audit reports with findings of substantial compliance are also posted on the Cyanide Code website, along with the Corrective Action Plan to return the operation to full compliance. When an operation completes all necessary actions to correct deficiencies, it may return to full compliance status.

Status of Corrective Action Plans

can be monitored at cyanidecode.org.

Inactive Operations

At the end of 2020, five operations were listed as inactive. Operations participating in the Cyanide Code program that have suspended their activity for at least six months, can enter "temporarily inactive" status. They can later re-enter the program under certain conditions. Reasons for inactivity might include economic and operational changes such as mine expansion or operational improvements.

Reported Cyanide Incidents

Signatories to the Cyanide Code agree to notify ICMI of any significant cyanide incidents that occur at any of their operations. In 2020, four incidents were reported.

1 / Mining

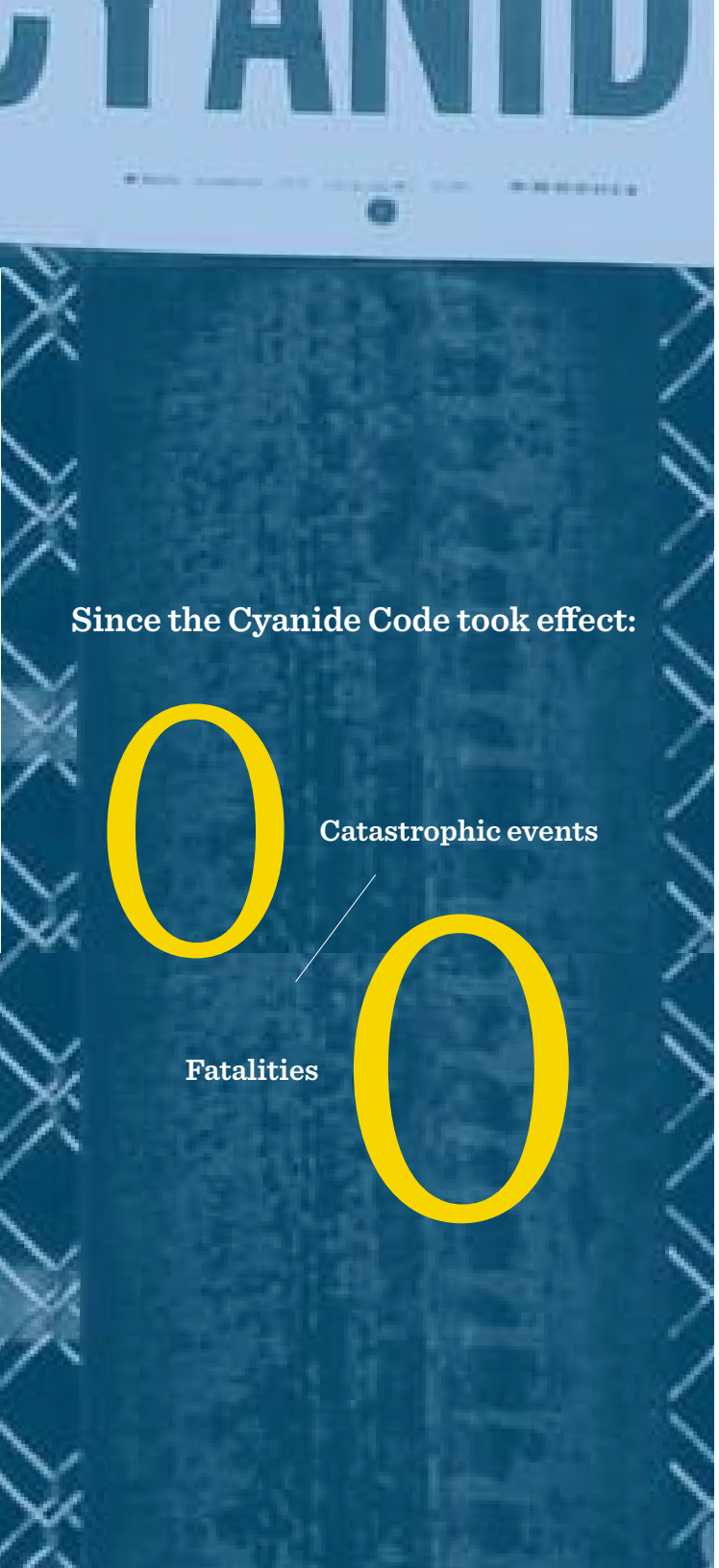
Accidental tailings release

In January 2020, a West African mine reported a cyanide solution release from the mine's tailings storage facility due to misidentification of a solution pipeline. The release reached a small stream; cyanide detoxification and raw water dilution measures were immediately instituted, and local government and community representatives were notified. Monitoring showed no cyanide contamination downstream of the release. The root cause was determined to be human error resulting from poor labeling of pipelines.

2 / Mining

Minor heap leach facility release

In December 2020, a mine in Mexico reported a minor cyanide solution release from the mine's heap leach facility due to a pump failure. Upon detection, the pump failure was addressed, and the contaminated soil treated in-situ and placed on the heap. The release was reported to regulatory authorities.

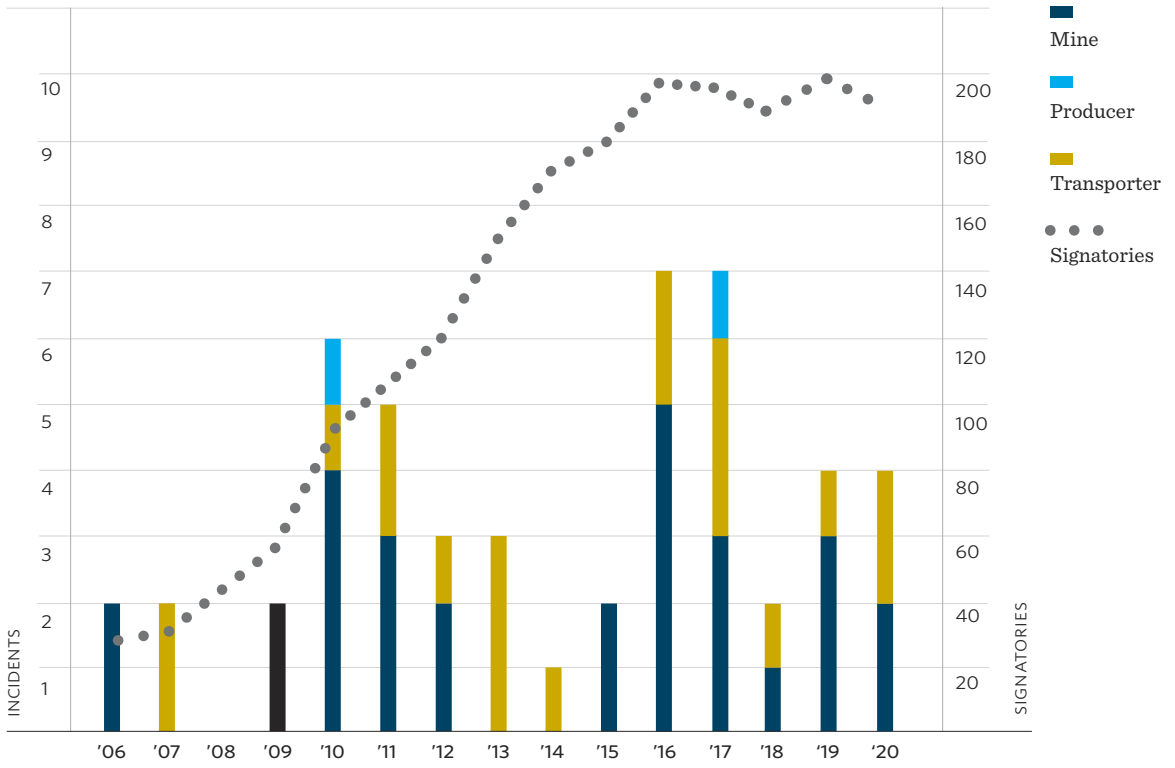


3 & 4 / Transport

Cyanide solids released from damaged shipping containers

In December 2020, transport incidents in western Europe and Australia occurred at ports. As stevedores loaded shipping containers of solid cyanide, the containers were damaged, resulting in the loss of containment of solid cyanide. In both instances, the areas were immediately evacuated and isolated and emergency services were alerted. After the situation was assessed, the hazmat and emergency services teams conducted clean-up operations. No injuries were reported.

Reported Cyanide Incidents, 2006 – 2020



Incidents and audits:

Mining these reports for *additional value*

ICMI monitors incidents and reviews audit reports. We also use these resources to extract information on best practices, performance statistics, and industry trends. This information provides insight into industry trends and developing practices for safe cyanide management. Recent trends noted:

Cyanide Antidotes

A variety of cyanide antidotes and treatments continue to be used at certified operations. Over half of the certified operations (53) use Cyanokits (hydroxycobalamine) as their primary antidote for cyanide toxicity. TriPacs, typically composed of two different antidotes plus amyl nitrite are second most common, and amyl nitrite as a sole treatment is third. The use of amyl nitrite as the sole treatment onsite has declined in recent years, with increasing limitations on its availability and use throughout the world. Only 14 operations in five countries continue to use amyl nitrite as the primary treatment for cyanide toxicity, seven of those operations are in the United States. However, worldwide, 37 operations continue to have amyl nitrite available either as the sole antidote or as a backup, or through inclusion in a TriPac.

Primary antidotes and treatments used:

Cyanokits*
53
operations
**hydroxycobalamine*

Tripacs
29
operations

Amyl nitrite
14
operations

Other
5
operations

Tailings

78
of the certified mining operations have tailings facilities

8 *of these 78*
are dry-stack

44 *of the remaining 70*
operations have cyanide-neutralization systems implemented to ensure that discharge into the TSF is below 50 ppm weak-acid dissociable (WAD) cyanide

12 *of these 44*
operations having neutralization systems maintain neutralization targets at less than 30 ppm WAD cyanide

Direct Discharge

The Cyanide Code requires that WAD cyanide concentrations in direct discharges to the environment be ***less than 0.5 ppm***.

24

operations discharge directly into the environment

all but 3 *of these 24*

have cyanide destruct systems in place to achieve discharge concentrations less than 0.5 ppm.

Reprocessing of Tailings and Waste Rock

Of the 105 Cyanide Code-certified mines, five operations reprocess tailings or waste rock. Four of these are in South Africa and one is in Tanzania. We expect to see increases in this number as some certified operations in South Africa come closer to the end of mine life and transition from active mining. Also of note is that reprocessing tailings typically consumes much larger quantities of cyanide than ore processing.

Dry-Stack Tailings

Eight Cyanide Code-certified operations process and store tailings as dry-stack tailings. Dry-stack tailings are tailings deposited after passing through a water extraction system (such as a filter press) and are then transported and deposited in a tailings deposit area, usually by conveyor. Dry-stack tailings operations are usually in areas with low water availability, or implemented to extend the life of tailings dams, as the volume of material deposited is reduced. Although dry-stack processing is typically more costly than slurry tailings deposition, this may increasingly become a common practice due to concerns over tailings dam safety.

Deliveries to Mine Sites

There are currently 77 Cyanide Code-certified trucking companies, of which 43 make final deliveries to the 105 certified mining operations. Some of the remaining 34 trucking companies move cyanide along parts of supply chains, such as from production operations to ports, or ports to warehouses, but do not make mine-site deliveries. There are also a number of non-signatory mining companies that require their contracted trucking companies to be Cyanide Code certified, which has substantially increased the number of certified trucking operations.

Cyanide Type & Delivery Trends

Briquettes

Delivered to 66% of certified operations

Of 66 certified operations, briquettes received in:

IBCs*	Isotainers
48	16

*Intermediate Bulk Containers

Flo-Bins	Metal Drums
1	1

Packaging Disposal

The Cyanide Code requires that cyanide packaging be managed in an environmentally safe manner.

Operations receiving cyanide as briquettes in IBCs and disposing of the IBC packaging offsite
(either by incineration or landfill)

24 *of 48*

The remainder of operations either incinerate or landfill the packaging at the operation.

Liquid Cyanide

Delivered to 35% of certified operations

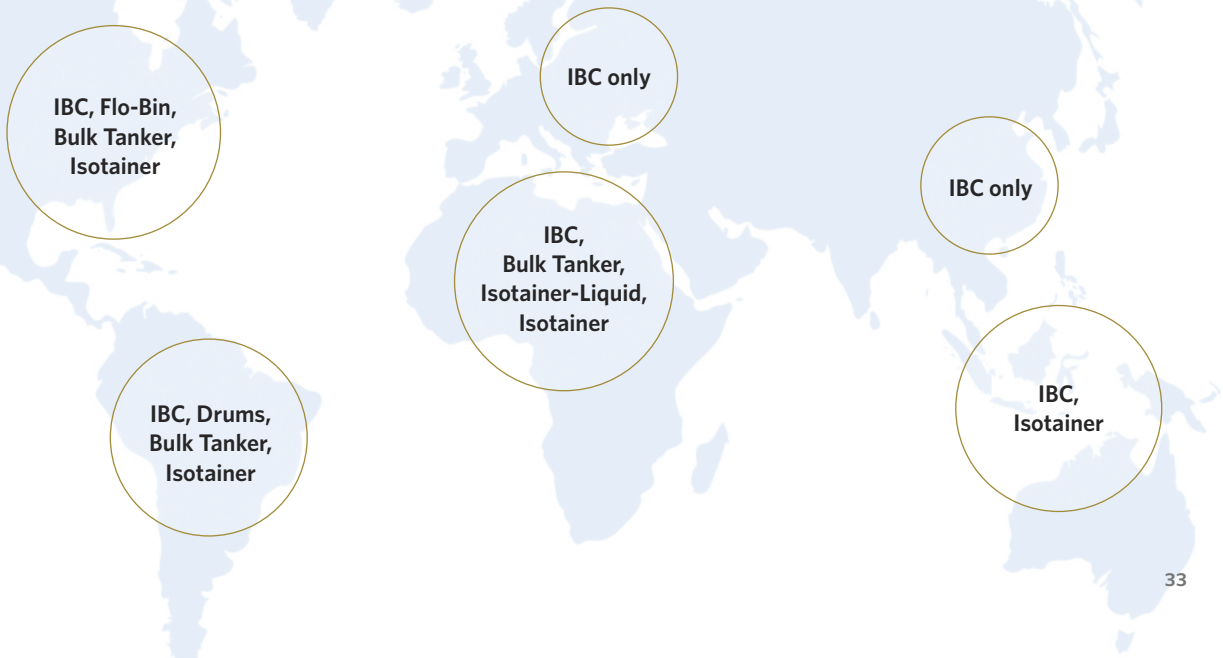
Of 35 certified operations, liquid cyanide received in:

Bulk Tankers	Isotainers
25	10

Delivered in 5 countries: Australia, Brazil, Canada, South Africa, USA

South Africa — only liquid cyanide is delivered to certified mines
Australia — 8 of 11 certified mining operations receive liquid cyanide
USA — 13 of 17 certified operations receive liquid cyanide

Delivery Systems by Continent



Financial Statements

	2020	2019
Receipts		
Signatory Fees	1,386,401	1,412,338
Signatory Fees for Future Year	186,136	175,376
Training Workshop Fees	7,600	5,500
Miscellaneous Income	500	139
Investment Income	19,349	20,305
Total Receipts	**1,599,986**	**1,613,658**
Expenditures		
Communications	33,392	486
General Office Expenses	110,208	100,801
Legal Services and Audit Fees	14,195	36,290
Outreach & Training	38,349	135,049
Staffing and Overhead	1,204,775	1,069,077
Travel Expense	–	45,222
Total Expenditures	**1,400,919**	**1,386,926**
Change in Net Assets	**199,067**	**226,732**
Net Assets at Beginning of Year	**1,776,905**	**1,550,173**
Net Assets at End of Year	**1,975,972**	**1,776,905**

Notes

i. The above summary is based on audited financial statements issued by Kosciw & Associates, LLC. Their financial statements were prepared on a modified cash basis of accounting, which is a comprehensive basis of accounting other than U.S. generally accepted accounting principles.

ii. ICMI is not a membership organization, and the corporation has no members. Companies choosing to participate in the program become signatories to the Cyanide Code and are assessed an annual fee. For 2020, the annual fees for signatories were: US$1,100 for transporters, $6,300 for cyanide producers, and for gold producers $0.042 per ounce of gold produced by cyanidation in the prior year.

iii. ICMI files annual information returns with the State of California, where it is incorporated, and with the U.S. Internal Revenue Service.

ICMI Management

Board of Directors

Paul Bateman, Chair
Gunter Becker
Edward Bickham
Thomas Hynes
Philip Klapwijk
Peter V. O'Connor, J.D.
Michael Rae
Elisa Tonda
Dirk Van Zyl, Ph.D

Officers

Paul Bateman
President

Eric Schwamberger, Ph.D.
Senior Vice President & Secretary

Yan Feng, CPA
Treasurer

Edward M. Green, J.D.
General Counsel

International Cyanide Management Institute

1400 I Street, NW, Suite 550
Washington, DC 20005, USA
TEL: + 1.202.495.4020
FAX: + 1.202.835.0155
EMAIL: info@cyanidecode.org
WEB: www.cyanidecode.org

To become a Cyanide Code signatory and be able to display this symbol, visit the Cyanide Code website or contact the Institute at info@cyanidecode.org.