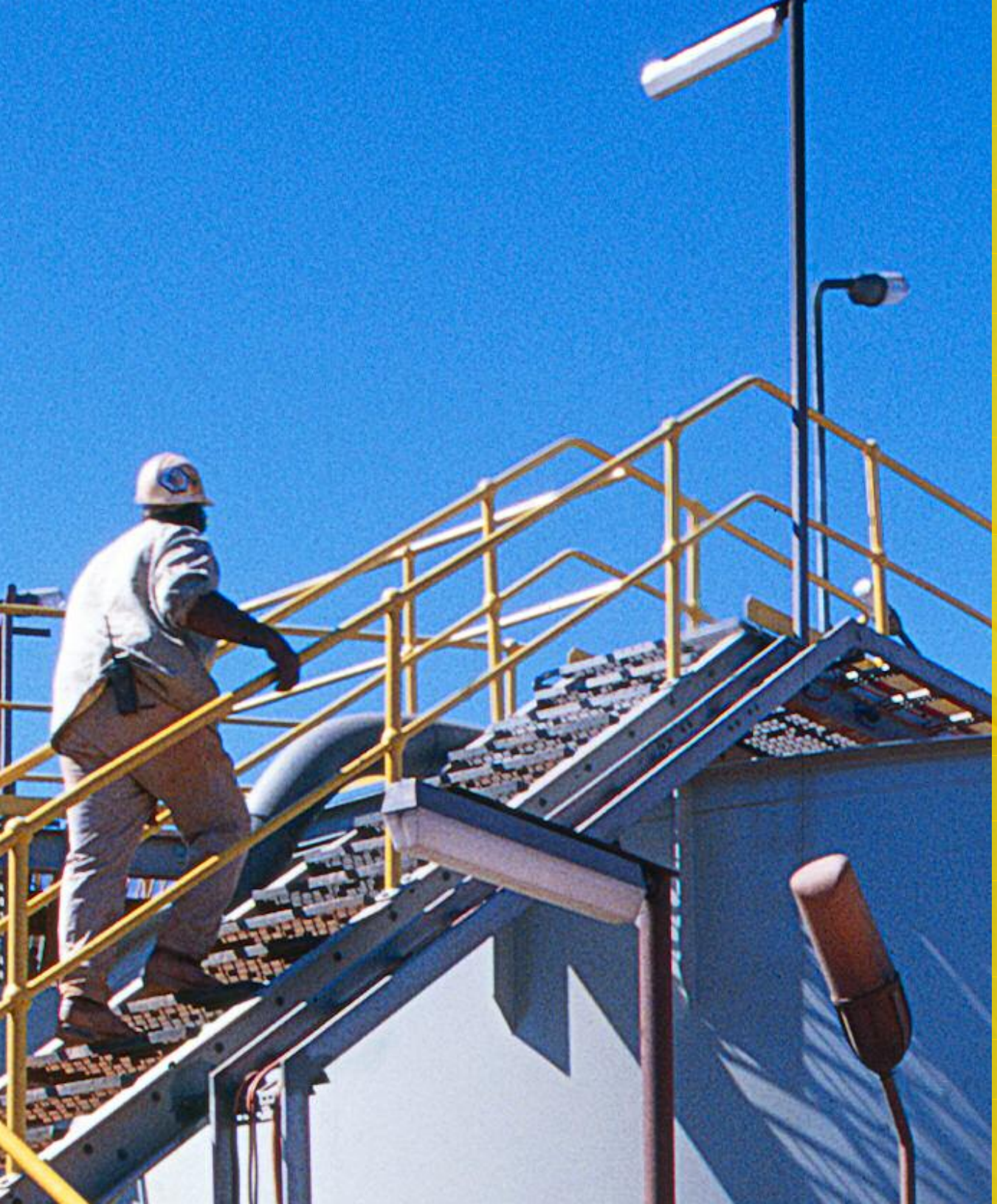
Assurance

The Cyanide Code at Work



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76% of the
top 60 Primary Commercial Gold Mines
using cyanide **participate in the Cyanide Code.**
Of those mines **91%** are **certified.**

Rigor. Certification. Transparency.

This is the International Cyanide Management Code

The Cyanide Code provides a management system for the safe use of cyanide in the global gold and silver mining sectors. Focused on protecting communities, workers and the environment, the program serves as a recognized assurance mechanism, with highly qualified third-party auditors independently verifying the compliance of participating companies' operations worldwide.

The Cyanide Code's assurance framework is strengthened by its transparency: audit reports are publicly available on the Cyanide Code website, along with the credentials of the auditors who conducted the audits. This increases public confidence in the safe management of cyanide and strengthens companies' relations with government and communities.

The Cyanide Code assures *VERIFIED Compliance* by providing:

- A recognized assurance mechanism
- Rigorous standards
- Independent third-party audits
- Publicly available audit results

The Cyanide Code Structure

9
Broad Principles
covering the cyanide use cycle

31
Auditable Standards of Practice

✓✓✓
Corrective Action Process

3-year
Audit Cycle

✓
Dispute Resolution process

Cyanide Code participants deliver industry-best performance throughout the cyanide use cycle.

These 9 Principles help Cyanide Code-certified mining operations meet their commitments.

1. Production
Use only cyanide 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 adverse 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 their operations.

Accessible on the **Cyanide Code website:**

- The Cyanide Code
- Implementation Guidelines
- Auditor requirements and protocols
- Audit reports for certified operations

2018 Highlights

81% Mining Operations Certified *multiple times*

99 Mines Certified

781 Cumulative Certifications *since program inception*

190 Cyanide Code Signatories *with* **330** Operations

85% Signatories Certified

50 Countries where the Cyanide Code is now at work

The Cyanide Code is a mature and established standards and certification program for the global gold and silver mining industry that serves as an assurance mechanism for the industry's stakeholders. Since its launch in late 2005, almost 300 operations worldwide have been certified in compliance with the Code.

The Cyanide Code reaches around the world to integrate health, safety and environmental management best practices across every component of the cyanide use cycle, from production and transportation, through use in mining to disposal.

By the end 2018, the Cyanide Code had 279 fully certified operations, including 67 fully certified supply chains. Even as cyanide travels across continents, compliance with the Cyanide Code helps assure consistent responsibility for the health and safety of people, wildlife and the environment along every kilometer.

In addition to expanding the global value of the Cyanide Code's rigorous standards, ICMI strengthened those standards even further in 2018: By mandating dye in high-strength cyanide solutions, the Cyanide Code now helps assure that workers, responders and the public can recognize cyanide hazards—at a glance.

Our requirements for certification assure that participating operations continue to implement the Cyanide Code rigorously. In 2018, 85% of Cyanide Code signatories were certified, while 72% have been recertified. Operations' longevity in program participation continues to assure workers, communities, governments, and other stakeholders that cyanide is being safely managed. Stakeholders hold these operations in the highest regard because certification isn't easy... or empty. It assures each operation is fully implementing the Cyanide Code.

Assuring the integrity of the auditors and the audit process is also essential to the Cyanide Code, and we hold auditors to high standards. We approve only independent, third-party auditors and require them to certify their credentials and experience. After two consecutive audits of the same operation, auditors must rotate to avoid bias and ensure fresh perspective.

The Institute received 86 audit reports in 2018. Companies engaged 34 qualified lead auditors (from 25 different firms) to conduct these audits, bringing in 15 additional auditors as technical experts.

The Institute is unique in assuring that the value of Cyanide Code compliance doesn't end with the audit report. Instead, those reports—781 of them to date—are mined for insights on effective management, risk mitigation, emergency response and other best practices. Since these reports are publicly available on the Cyanide Code website, they are accessible to every stakeholder worldwide.

The Institute also uses report content to assure the relevance and timeliness of training programs. In 2018, ICMI used these insights to strengthen training and conduct workshops in West Africa and Mexico.

The unique transparency of the certification process—and the audit reports themselves—help assure Cyanide Code signatories' social license to operate. These business insights and risk-reduction strategies contribute to good corporate governance and business value. They map a path to continued excellence, measured in *fewer incidents with lower impact*. That's why even companies that don't formally commit as signatories still rely on the Cyanide Code to guide their operations and help protect *everyone's* future.

I would like at this time to thank our ICMI staff for another year of excellent work, and our Board of Directors for their insightful guidance. In particular, a debt of gratitude goes to John Gammon who retired from our Board after eight years of service.

Once again, my thanks to our signatory companies that have continued to elevate their performance through commitment to the Cyanide Code's Principles and Standards of Practice. Through their actions these companies demonstrate the great value and global importance of corporate responsibility and assurance to stakeholders.

Paul Bateman, *President*

Assurance for certified operations –

85% of Operations are now *certified*

99 certified mines	**31** certified production facilities	**149** certified transport operations

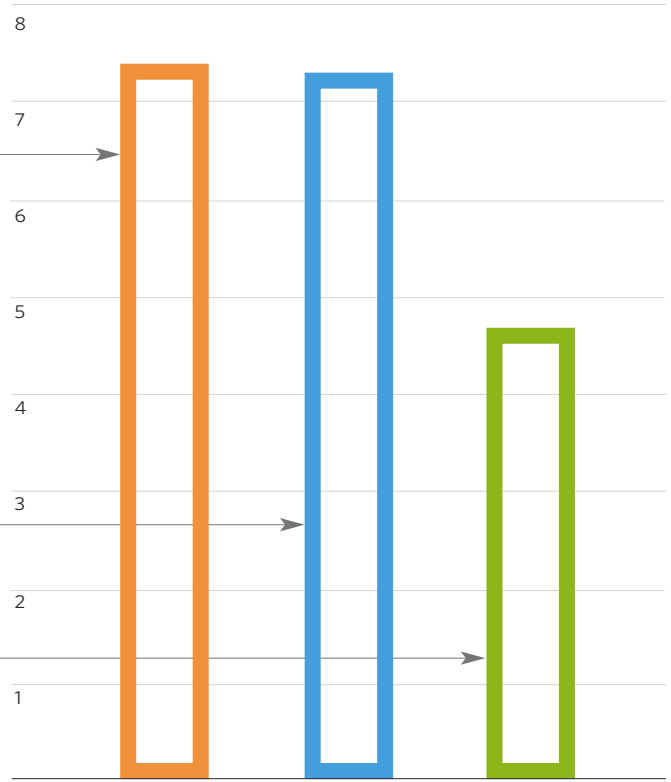
In 2018, 108 operations achieved Cyanide Code certification, including 77 that were recertified and 8 mines that were certified for the first time. Of the 330 participating operations, 279 are currently certified as compliant with the Cyanide Code. Since the start of the program, the Institute has announced 781 certifications.

Number of Countries with Certified Operations: Mining 25 / Production 15 / Transportation 38

Assurance for recertified operation –

More than 72% of Operations have been *recertified*

Average Duration of Operations' Certification *(in years)*



Certified Mining Operations

- 81% have been recertified.
- The Marigold mine has now been certified 5 times, while the Cowal mine has been certified 7 times, a new high for the number of certifications by an operation.
- Another 27 mines have been certified 4 times, demonstrating long-term commitment to safety and environmental protection.

Certified Production Operations

- 10 have been certified 4 times.

Certified Transportation Operations

- 7 have been certified 4 times.

Assuring a program of global reach and participation –

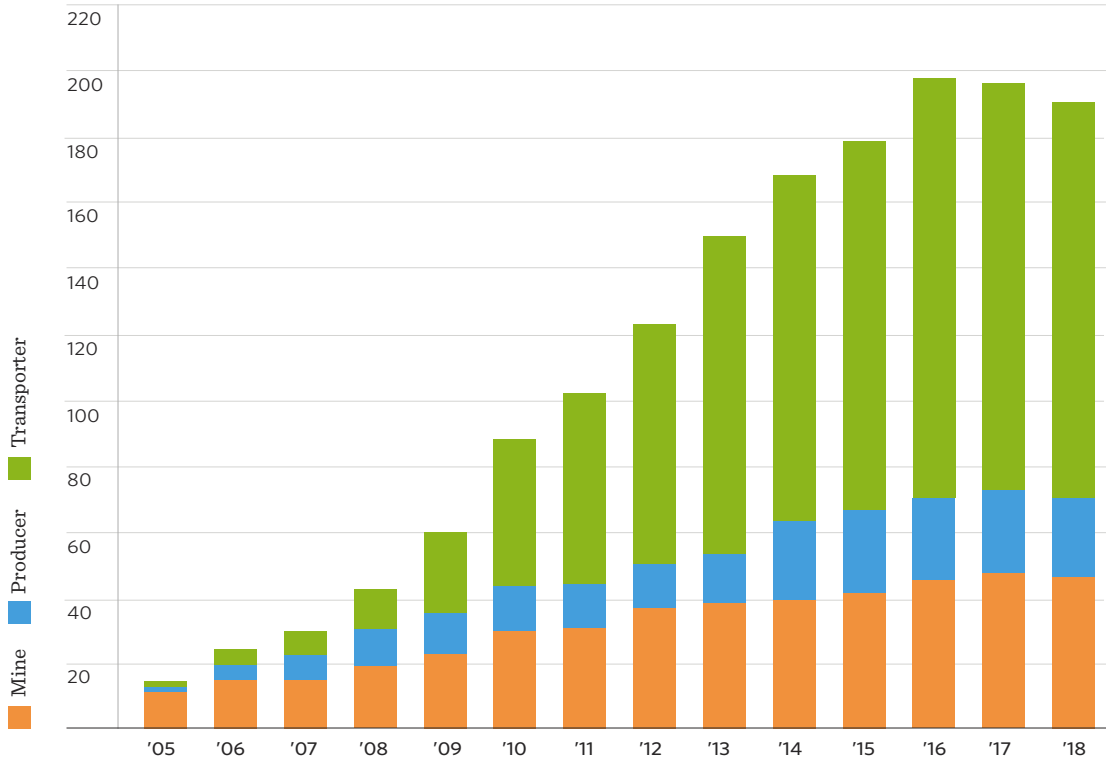
Diverse companies implement the Cyanide Code— large and small, in all environments, *on six continents*

	Mining	Producers	Transporters	Total
Signatory Companies Admitted in 2018	2	–	14	16
Signatory Companies Withdrawn in 2018	3	1	17	21
Signatory Companies 12/31/18	46	22	122	190

The industry's support of the Cyanide Code remained steady, though by year-end we did record a net loss of 5 signatories. During the year, there was a normal turnover of participating companies, and by April 2019 we climbed back to 193 and have several new companies expected to be applying soon.

View complete list of current signatory companies here.

Signatory Companies 2005 – December 31, 2018

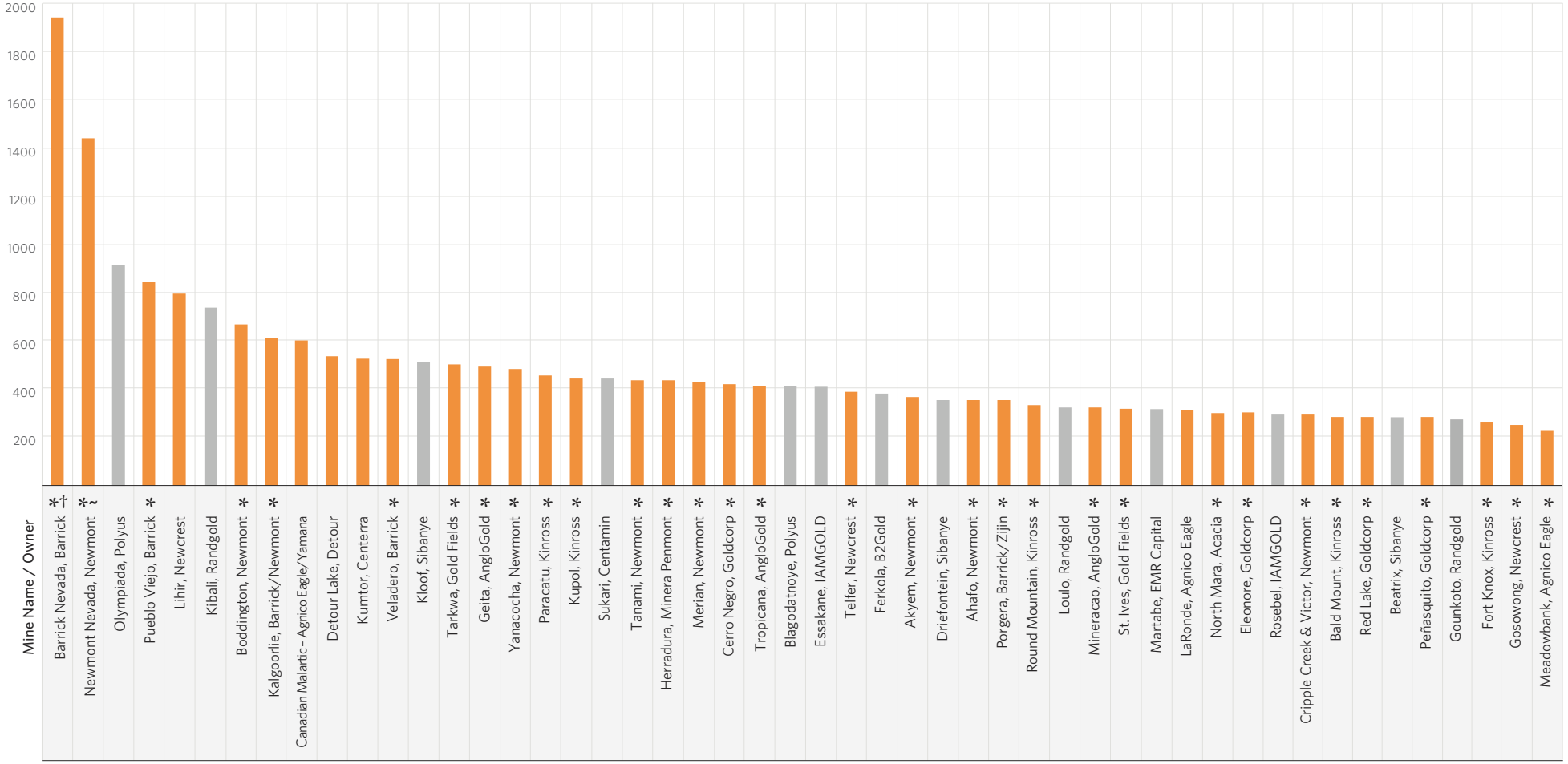


Top Primary Commercial

Gold Mines *Using Cyanide* in 2018

Annual Gold Production in 1000 ounces

2018 gold production compiled by ICMI from various sources; list excludes operations majority-owned by governments



Participant Operation in Cyanide Code ✻ Certified Operation(s) † Barrick Nevada includes Cortez and Goldstrike mines ~ Newmont Nevada includes Carlin, Phoenix, Twin Creeks, Lone Tree, and Long Canyon mines

Assuring risk mitigation throughout the supply route –

Cyanide supply chains stretching *1000s* of kilometers

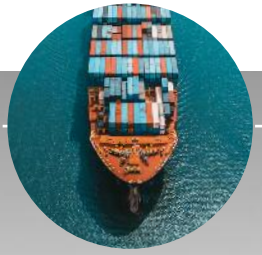
Cyanide's journey to mines can involve truck, rail, cargo vessel and barge transport through warehouses, ports and communities. By holding mines, producers and transporters to rigorous standards, the Cyanide Code assures that even when supply chains stretch across borders and between continents, cyanide is being responsibly managed every kilometer of the way.

Supply Chains certified, *end-to-end*

Responsibilities for cyanide transportation result in certification of individual transporters as well as fully certified supply chains which include the facilities that manage and transport cyanide between production and its mine site destination. ***Of the 67 Cyanide Code-certified supply chains:***

55
include
trucking

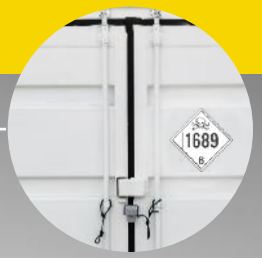
42
include
ports



29
include
marine carriers

7
include
intercoastal/ river barges

14
include
railroads



11
include
warehouses

149

Cyanide Code-certified transport operations in

38

countries

Cyanide Code audit reports –

Rich with detail, audit reports can *point to trends* at Operations employing best practices.

A review of the 99 certified mines in 2018 showed the following:

- 17% of certified operations have both mill and heap leach circuits, while 30% have only heap leach circuits, and 53% have only mill circuits.
- 54% of certified mines operate destruct circuits to destroy cyanide in their effluent solutions.
- Five certified cyanide manufacturers supplied 86% of the mines.
- 64% of certified operations receive solid cyanide in briquette form, while 36% receive liquid cyanide.
- Liquid cyanide is delivered to certified mines in only five countries.
- Delivery of cyanide in isotainers is increasingly common, with 24% of operations now receiving isotainers; only one operation receives cyanide in flo-bins.
- Cyanide antidotes requiring intravenous administration are available at 82% of these mines; use of amyl nitrite is declining.

Environmental Protection – Discharge and Cyanide Destruct Circuits			
	Cyanide Destruct Circuit	No Destruct Circuit	Total Operations
No discharge to the environment	35	42	77
Direct discharge to the environment	19	3	22
Total Operations	54	45	99

- Majority of certified mining operations (77) have no direct discharge to the environment.
- Only 22 operations have direct discharge to the environment, which occurs at low concentrations and below protective limits established by the Cyanide Code..
- 19 of the 22 operations having direct discharge operate cyanide destruct circuits to destroy cyanide in their effluent solutions.
- Three of the 22 operations having direct discharge manage their effluent cyanide concentrations by means other than a cyanide destruct system.

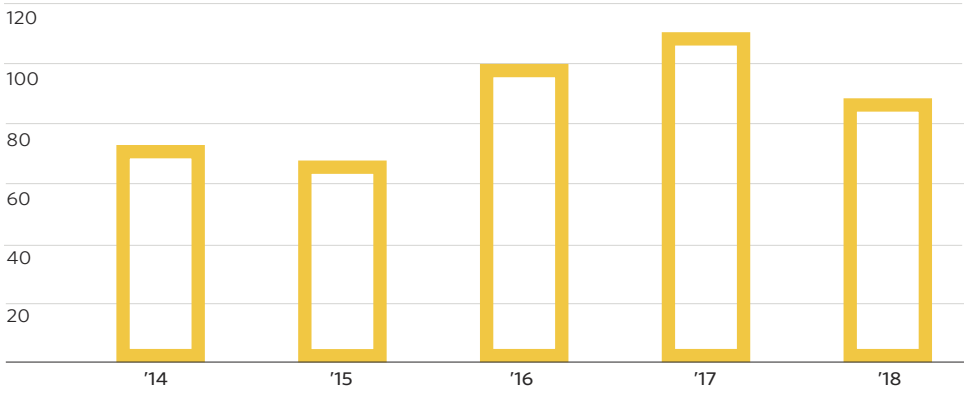
Assuring risks are identified and addressed –

Rigorous audits *and* publicly available results

Over 450 audits conducted in past five years; 86 audit reports received in 2018

Key to the Cyanide Code's stakeholder acceptance is that compliance is verified by independent, third-party auditors. To assure findings are supported by the details required by the rigorous standards of the Cyanide Code and its guidance documents, these highly qualified auditors conduct thorough onsite inspections, interview site personnel, and review records and other documentation.

Number of Audit Reports Received by ICMI



Cyanide Code audits assure presence of necessary safeguards by assessing:

- Financial Assurance & Corporate Management
- Environmental & Safety Practices
- Training
- Emergency Response
- Risk Communication
- Inspections & Record Keeping
- Physical Plan Operation & Maintenance

For auditors and their auditing –

ICMI sets *high standards*

To assure thoroughness of the Cyanide Code certification process and the rigor of audits, the Institute reviews each audit for completeness.

All auditors must submit notarized credentials for each audit. These are posted on the Cyanide Code website alongside their reports summarizing the audit findings. This assures transparency of the certification process by allowing stakeholders to examine auditors' qualifications, including industry experience, auditor certifications by other organizations, and the number and type of audits which they have previously conducted.

The Institute believes the program's assurance mechanisms and transparency set it apart from other industry standards programs and reflect the end-to-end rigor of the Cyanide Code.

Cyanide Code Assurance Mechanisms

Auditors	ICMI	Cyanide Code website
Onsite inspections – Personnel interviews – Records/documentation review	Review reports – Seek clarification from auditors	Summary of the report – Corrective Action Plan – Credentials of the auditor

In 2018, ICMI received
86 Audit Reports for review
submitted by **34 Lead Auditors** ***(from 25 firms)***
with contributors from
15 Auditors serving as **Technical Experts.**

The Cyanide Code protects us all –

That's why ICMI assures that auditors *measure up*

To qualify as a Cyanide Code auditor, the auditor must meet strict requirements determined by the Institute. Lead auditors, for example, must demonstrate knowledge and understanding of auditing principles as well as dedication to the ethical performance of their professional duties. Only auditors currently certified by a recognized self-regulating professional organization may lead Cyanide Code compliance audits. This assures the Code audits are performed by auditors meeting high standards, and provides a mechanism for potential discipline, including loss of professional certification, for substandard or unethical conduct.

Auditors must hold certification as an environmental, health or safety auditor or environmental, health or safety management systems auditor at any grade or level other than an entry or provisional level. Auditors with other professional-auditor certifications are acceptable *only if* their training and qualifications are relevant to a Cyanide Code audit.

Certification must be from a professional organization with the following attributes:

- A Code of Ethics that the certified professional auditors must follow
- A process by which certification can be revoked if an auditor is found to have conducted an audit in an unethical or unprofessional manner
- Requirements for education, experience and/or expertise for initial certification
- Requirements for continuing professional development or education and continuing auditing experience for maintaining certification

Auditors who fail to adhere to ICMI's strict requirements *can be* disciplined. In 2018, the Institute suspended two auditors and one audit firm for an indefinite period.

How ICMI assures that auditors *remain* independent

The Institute does not allow any auditor to conduct *more than two consecutive audits* for the same Cyanide Code participant. Rotation of auditors ensures that operations are examined by auditors with different perspectives and experience, and a fresh pair of eyes.

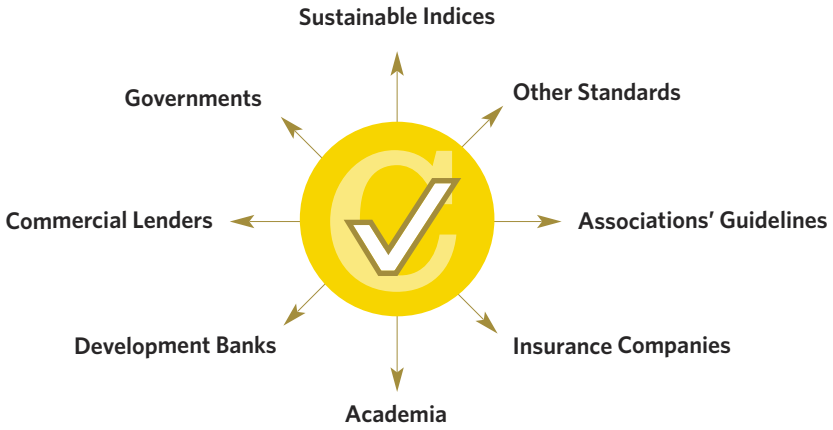
Currently,
108 auditors are approved
to audit Cyanide Code compliance.

Assuring consistently high standards –

Cyanide Code certification *strengthens* the entire industry

With comprehensive reach and rigor, the Cyanide Code is being used to complement a wide range of government and industry initiatives worldwide. This includes use by lenders, regulatory bodies, and other standard organizations in evaluating operational performance.

Increasing Interoperability and Use of the Cyanide Code



How the Cyanide Code helps assure stakeholders' interests

Mines

The Cyanide Code sets standards for performance that participating companies can follow to be most effective in minimizing the chance of incidents and their consequences. The rigor of the program also facilitates ISO compliance, government regulation, and contributes to solid business operations.

Governments

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

Insurers, Lenders, & Investors

Access to posted audit reports helps assess operational best practice and risk management.

Producers & Transporters

Compliance with the Cyanide Code minimizes the risks of cyanide incidents in the supply chain and the impact incidents can have.

Workers

No matter where operations are located, the Cyanide Code helps workers benefit from training, risk mitigation, safe conditions, and effective emergency response.

Communities

Whether during cyanide production, transportation, or use at mines, the Cyanide Code helps protect people, wildlife and the environment and ensure a rapid, effective response to any incident.

Assuring effective emergency response –

Code implementation *can minimize* cyanide incidents

Cyanide Code signatories *must report* any significant cyanide environmental or safety incidents to the Institute. The information becomes part of materials reviewed during the operation's next audit.

WITHIN 24 HOURS OF AN INCIDENT, ICMI should receive from a signatory:

- Initial notification
- The date and nature of the incident
- How the operation responded

Catastrophic incidents in the past **13 years** among Cyanide Code-certified gold mines:

Zero.

In 2018

Two incidents reported

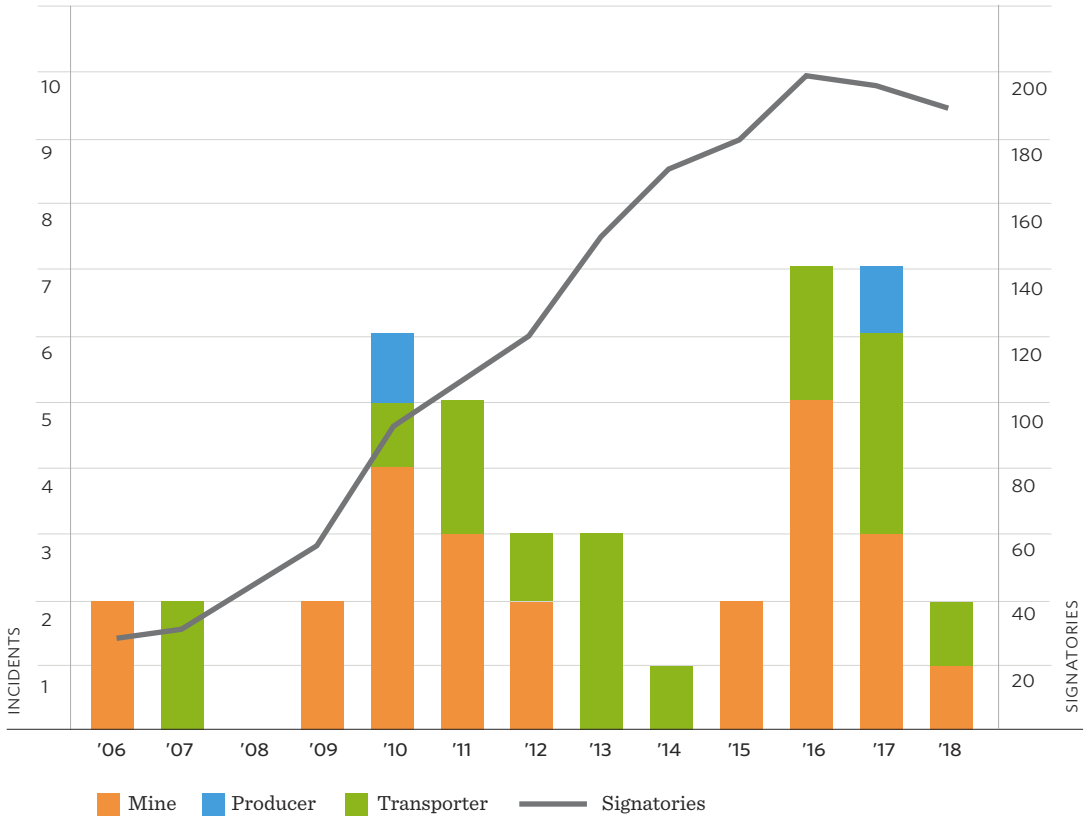
1. Mining:
Seepage from a tailings storage facility

Discovered during routine inspections, the incident was communicated to regulators and communities, and affected water courses were guarded to prevent access. Communities were provided drinking water, although no cyanide was detected in any drinking water bores. Analysis indicated trace elements of cyanide in adjacent streams. No cyanide was detected in any of the surrounding groundwater monitoring bores. An area of the tailings dam was identified as the origin of the seepage, repairs commenced immediately, and a remediation plan for the area was developed and implemented.

2. Transport:
Driver contact with cyanide

During delivery of cyanide by a certified transporter to a non-participating mine, a driver off-loading an ISO container at the customer site came into contact with cyanide solution. The driver was wearing correct protective equipment, but a small amount of solution contacted his neck under the face shield. The driver was immediately showered and sent to the hospital as a precaution. The driver exhibited no symptoms of exposure, and no antidote was needed.

Reported Cyanide Incidents, 2006 – 2018



Through 2018, 8 incidents involved worker exposure and 34 incidents involved environmental releases. About two-thirds of the environmental issues were completely contained onsite at mines and attributed to engineering or mechanical failure (11) or operator-involved error (9). About two-thirds of the environmental issues were completely contained onsite at mines and attributed to engineering or mechanical failure (11) or operator-involved error (9).

Assuring workers that responders can recognize cyanide hazards –

New requirement to dye high-strength cyanide solutions

In 2018, following public and industry comment, the Institute amended the Cyanide Code to require that dye be added to high-strength (15% or more) cyanide solutions. Since cyanide is colorless in solution, the dye helps protect maintenance personnel and first responders by creating a clear visual distinction between high-strength cyanide and rainwater or other solutions.

In the event of **spills or leaks**, dyed solution **immediately alerts** personnel to the presence of cyanide.

This new requirement takes effect **July 1, 2019.**

Assuring stakeholders know where companies stand –

Audits *and* Corrective Action Plans are published on the Cyanide Code website

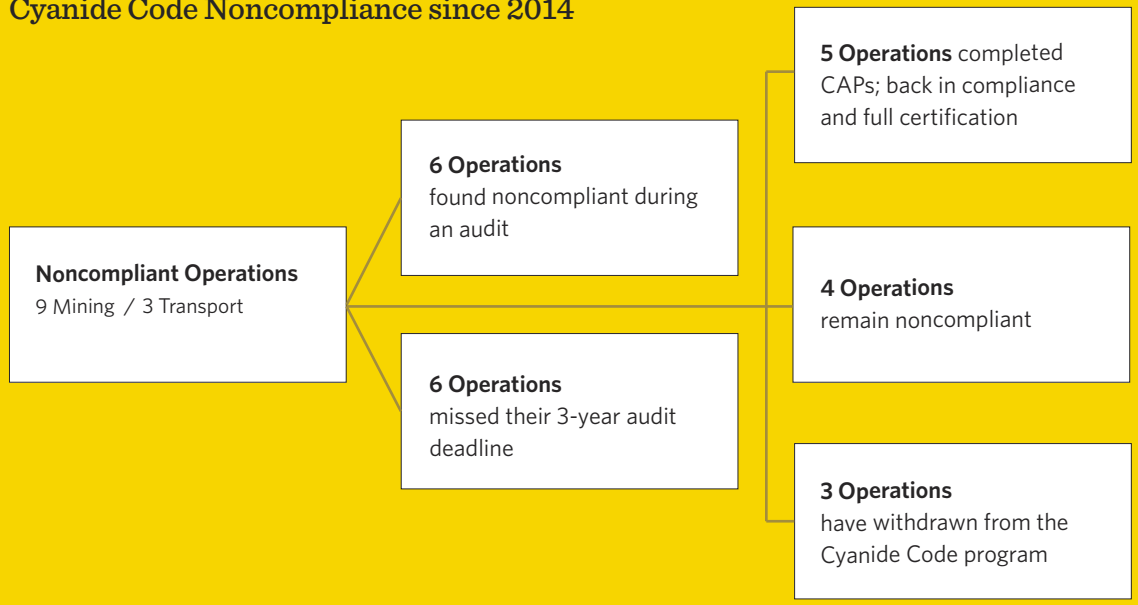
Noncompliance Status

Noncompliance with the Cyanide Code can be triggered by issues such as weaknesses in operational practices, documentation or failing to complete regular certification audits by the deadline.

What happens when an auditor finds noncompliance?

- The operation can remain a signatory but is flagged as noncompliant
- The audit report states the reasons for the noncompliance finding(s)
- The Correction Action Plan (CAP) is posted
- Progress on corrective actions and return to compliance are tracked

Cyanide Code Noncompliance since 2014



Since 2014, **10 mining operations** & **2 transport operations** have been found in **Substantial Compliance**. All returned to ***Full Compliance.***

Substantial Compliance Status

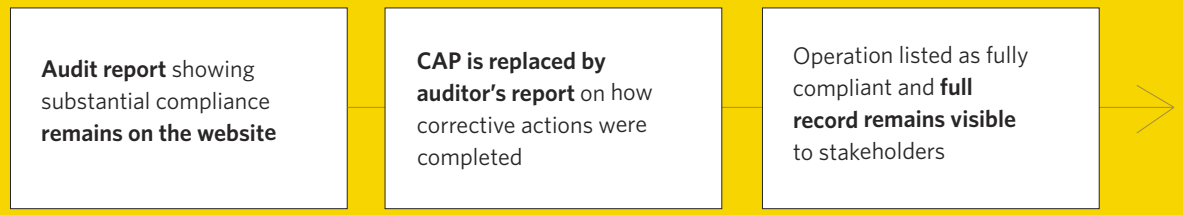
To provide further transparency to stakeholders, audit findings of *substantial compliance* are posted on the Cyanide Code website.

To be substantially compliant vs. noncompliant, an operation:

- Has a deficiency that does not present an immediate risk to health, safety or the environment
- Has made a good faith effort to comply with Cyanide Code prior to the audit
- The deficiency must be correctable within one year

When an operation completes all necessary actions to correct deficiencies it may return to full compliance.

How Compliance progress is reported on the Cyanide Code website



Inactive Operations

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. At the end of 2018, five mining operations were listed as temporarily inactive, all of which were certified at the time they became temporarily inactive. Reasons for inactivity might include economic reasons and changes in operations such as mine expansion or operational improvements.

2018 Financial Statement

	2018	2017
Receipts		
Signatory Fees	1,458,742	1,367,634
Signatory Fees for Future Year	135,306	103,562
Training Workshop Fees	6,843	25,615
Miscellaneous Income	244	230
Interest Income	10,855	697
Unrealized Gain (Loss)	(5,047)	0
Total Receipts	**1,606,943**	**1,497,738**
Expenditures		
Communications	43,352	7,628
General Office Expenses	94,679	92,998
Legal Services and Audit Fees	52,782	16,702
Outreach & Training	112,327	80,886
Staffing and Overhead	973,276	931,099
Travel Expense	58,689	55,695
Total Expenditures	**1,336,195**	**1,185,008**
Change in Net Assets	**270,749**	**312,730**
Net Assets at Beginning of Year	**1,279,424**	**966,694**
Net Assets at End of Year	**1,550,173**	**1,279,424**

Notes

i. The above summary is based on audited financial statements issued by Kosciw & Associates, LLC.

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 2018, 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.

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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.