

# IRMA-Stillwater Field Test

October 2015

## Final Report

# IRMA-Stillwater Field Test Report



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# IRMA-Stillwater Field Test Report

## Introduction and Goals of the Field Test

The Initiative for Responsible Mining Assurance (IRMA) conducted its initial field test of the *Standard for Responsible Mining* during the week of October 19-23, 2015.

The Stillwater Mining Company (SMC) hosted the field test at the SMC platinum/palladium mine near Columbus, Montana, USA.

The goals of the IRMA-SMC Mine Field Test (“the Field Test”) were to:

- Test draft v1.1 of the IRMA *Standard for Responsible Mining*<sup>1</sup> (the Standard) at an existing mid-size, underground mining operation located in North America.
- Test the suggested means of verification and determine if the IRMA Standard requirements are auditable.
- Test the draft scoring system being proposed to measure a company’s performance against the IRMA Standard.
- Provide information to inform IRMA on how the draft Standard, means of verification and scoring system may need to be refined prior to finalization of the Standard and launch of the IRMA System.
- Increase confidence, among all stakeholder groups, that the draft Standard is informed by data tested in the field.
- Build a new collaborative relationship between IRMA and the Stillwater Mining Company, which has a history of commitment to environmental and social responsibility, toward the common goal of developing a program that encourages more responsible mining globally.

Given the time available for the field test, the scope of the audit was limited to a sub-set of chapters. The chapters were chosen based on their applicability to the SMC mine site and input from IRMA staff on chapters whose content they wished to prioritize for review.

The selected chapters were divided into two streams (those to be handled by the auditors trained in social responsibility; and those handled by auditors trained in environmental compliance) in order to best utilize time on-site. The chapters included in the scope of the field test are found on the following page.

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<sup>1</sup>The version of the Standard tested at the Stillwater mine was a revised version of the first draft of the IRMA *Standard for Responsible Mining*, which was released in July 2014. The revisions were based on more than 1,400 points of comment received from more than 75 commenters (individuals and organizations) over a 4-month period (July 22 – November 22, 2014), and feedback from cross-stakeholder discussions and expert input between January and October, 2015.

Stream A Business Integrity / Social / Management	Stream B Environment
Chapter 2.8—Community & Stakeholder Engagement	Chapter 3.1—Water Quality
Chapter 2.9—Community Support and Benefits	Chapter 3.2—Water Quantity
Chapter 5.1—Environmental and Social Impact Assessment	Chapter 3.3—Mine Waste Management
Chapter 5.2—Environmental and Social Impact Monitoring	Chapter 4.1—Reclamation and Closure
Chapter 5.3—Grievance Mechanism/Access to Remedies	Chapter 3.4—Air Quality
Chapter 2.11—Cultural Heritage	

## Methodology

Where possible, the field test was conducted in a manner similar to what is envisaged for an IRMA certification audit. Auditors hired by IRMA to participate in the field test reviewed company documentation; made first-hand observations by visiting the mine site; and conducted interviews with company representatives and stakeholders as a means of verifying whether or not the requirements in the Standard had been or could be met by SMC.

A field test template was created to record the comments and observations made during the field test. The template listed every requirement for the chapters included in the field test scope. For each requirement, there was space to record:

- types of documentary evidence that could be used as a means of verifying the requirement;
- observations on the company’s practices in relation to the requirement
- comments from interviewees on the requirement (e.g., was it understandable; relevant to the chapter’s objectives; achievable, even if the company was not currently meeting it; etc.);
- comments from auditors on the requirement (e.g., was it understandable; relevant; achievable; auditable; how might the requirement and/or means of verification be improved; what sort of guidance would be useful for auditors; etc.).

Additionally, as a means of testing a proposed IRMA scoring system, there was space in the template to provide scores (1 - major non-compliance, 2 - minor non-compliance, and 3 - compliance) to indicate how well the mine site

performed on a requirement. As this was not the primary focus of the field test, auditors did not record scores for all of the requirements.

## Assessment Team

The field test assessment team consisted of three auditors, two with social auditing experience and one with an environmental auditing background.<sup>2</sup> Unlike a typical certification audit, however, in addition to auditors the assessment team included IRMA staff and contractors who were involved in drafting the IRMA Standard. IRMA representatives were included to provide auditors and the company with background on the intent of the various Standard requirements; and also to receive feedback to help guide future revisions to the Standard. Additionally, one stakeholder representative observed the field test process during two of the five days.

All assessment team members signed confidentiality agreements with Stillwater Mining Company prior to beginning the field test. The agreement outlined terms and conditions for sharing information publicly following the field test.

## Provision of Documents

IRMA and SMC jointly developed a list of documentation, including plans, assessments, studies, reports and other documents, that would aid the assessment team in verifying that the Standard requirements had been met. SMC provided some of this documentation prior to the on-site portion of the field test via a shared online folder. During the on-site portion of the field test SMC provided additional documentation.

## On-Site Visit

The on-site portion of the IRMA-Stillwater Mine Field Test was conducted over a five-day period, from 19 through 23 October, 2015, and included a tour of above-ground mining facilities; interviews with relevant mine management staff and a small sample of community representatives; and review of company documents.

These activities mirrored the expected process to be followed during an actual IRMA certification audit, however, the field test diverged from a typical audit in a number of ways:

- Interviews that were conducted with both staff and stakeholders were much more collaborative in nature and focused on collectively determining if the Standard requirements were met. Additionally, interviewees were asked to provide feedback on the IRMA Standard and verification system (e.g., were

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<sup>2</sup> One auditor was a private contractor, and two auditors were from UL, a global independent safety science company that also delivers certification services ([www.UL.com](http://www.UL.com)).

the requirements understandable, achievable and representative of best practice; could the requirements be verified in a manner that would not place an undue burden on the mining company and/or stakeholders; etc.).

- The assessment team did not examine sites in detail, nor did the assessment team request to see areas that were not on the mine tour but which, in a full certification audit, may have been of interest.
- The assessment team did not interview employees beyond management, and did not contact or interview the full range of stakeholders.
- Auditors provided IRMA with feedback on the wording and auditability of the requirements, based on their experience with other standards and certification systems.
- The company did not receive a detailed report outlining the auditors' assessment of its conformance with all of the IRMA Standard requirements reviewed during the field test. However, SMC was provided with general feedback on areas where its current practices were not fully aligned with the some aspects of the current draft Standard, so that Stillwater might consider changes toward possible future certification.

These deviations from a regular certification audit were made to accommodate the different focus of the field test (i.e., effectiveness of the Standard rather than conformance of the company). A certification audit would have been much more focused on triangulation/verification of evidence of conformance. The assessment team was cognizant of this shift from regular auditing practice and was diligent in noting where they felt that the wording of the Standard would be difficult to verify in an actual audit setting.

## Report Writing

Interviewee comments, assessment team notes, observations and suggested scores were documented in the field test template during and in the two weeks following the on-site portion of the field test. The information captured in the template, as well as bigger-picture reflections and analysis provided by the auditors, form the basis of the discussion, below.

## Level of Effort

The total auditor level of effort (not including IRMA representatives) for the field test was projected to be 6 person-days of preparation, 15 person-days on site, and 6 person-days for post-field-test report writing. Additional time was budgeted for travel. One auditor left the on-site portion of the audit on day 3, due to a family emergency, thus a total of 12 person-days on site were utilized.

## Budget

The total costs for the field test were approximately US \$60,000.

## Discussion

### Observations on the Standard

The assessment team made detailed comments and suggestions for improvement on each requirement of the chapters that were in scope for this field test. Comments for evaluating each chapter were organized in the following categories:

1. **Overall comments:** While each of the chapters reviewed had some requirements that needed additional clarification or guidance to be auditable and facilitate more uniform interpretation, overall was the chapter generally understandable, relevant and auditable?
2. **Potential unintended barriers to certification:** Were there any areas where the assessment team thought there could be a barrier to a site being certifiable that was not intended by the Standard writers. A barrier is something that the operating company could not fix and that would prevent a site from ever being certified. Most potential barriers are requirements for something to have been done in the past (i.e. before operations start).
3. **Duplication:** Was there duplication of requirements within the Chapter or between this Chapter and other Chapters. Duplication between and within Chapters is problematic as it may set slightly different, and potentially opposing, criteria for the same issue and it results in multiple non-conformances for the same action.
4. **Clarity:** Was the assessment team able to reach the same or similar interpretation of the Chapter requirements as the Standard writers; was there a need for clearer language or definition of key terms. Clarity is often tied to the degree of potential for variability in interpretation as vague and ambiguous word such as 'reasonably' or 'where practical'
5. **Degree of potential for variability in interpretation:** In this category of observations the assessment team highlights where chapters are more prescriptive or more interpretative. Quite often in social and environmental standards there is a struggle between writing requirements that are prescriptive, and consequently quite inflexible, and those that are interpretation-based, and thus more flexible. Prescriptive requirements give the greatest certainty for a particular outcome because the action or outcome is prescribed, whereas interpretation-based requirements allow room for consideration to differences in scale and scope of an operation, desires of different local stakeholders and to varying ecologic and environmental conditions.
6. **Other:** Were there other significant concerns or comments on a chapter.

The assessment team made detailed comments and suggestions for improvement for each requirement of the chapters reviewed during the field test. See [Appendix I](#) for a summary of comments for each chapter.

## Observations on the Assurance System

Assurance System Components	
<b>Audit Level of Effort</b>	<p>The Standard is thorough and demanding. The auditors estimate that a full certification audit could require a four-person assessment team to be on-site for period of 5 to 10 business days to ensure sufficient time for a credible audit. The on-site time would vary by site depending on:</p> <ul style="list-style-type: none"> <li>• the complexity and size of the mining operation;</li> <li>• the extent of stakeholder outreach required;</li> <li>• the audit scope (i.e., the number of relevant chapters of the Standard) that apply to the site;</li> <li>• the readiness of the applicant prior to the onsite portion; and</li> <li>• the availability of documentation off-site in advance of the audit.</li> </ul>
<b>Auditor Expertise</b>	<p>Depending on the scope of the certification audit an assessment team would likely be composed of individuals with expertise in social systems, labor, environment, health and safety. Given the technical nature of some environmental chapters, it would be beneficial to include auditors with first-hand experience at industrial-scale mining operations. Regardless, it will be important that IRMA develop a rigorous auditor training program to assure competence to assess compliance with the IRMA Standard.</p>
<b>Certification Audit Cost</b>	<p>Based on costs associated with this first field test, and factors such as the auditor level of effort above, it is estimated that auditing costs could range from US\$50,000 to more than \$100,000 (e.g., for a large, complex site that has a broad audit scope). Cost of audits will vary based on the following considerations:</p> <ul style="list-style-type: none"> <li>• auditor level of effort (described above);</li> <li>• location, and subsequent travel costs;</li> <li>• translation (finding qualified local auditors in each mine location may be difficult, so translators may be needed); and</li> <li>• any honorarium costs to reimburse time and/or expenses of stakeholders or observers.</li> </ul> <p>* IRMA representatives indicated that IRMA is exploring options that might offer low-cost auditing so that the financing of audits, especially for some small operations in economically disadvantaged circumstances, isn't a leading barrier to participating in IRMA.</p>
<b>Scoring System</b>	<p>The scoring system (major non-conformance =1, minor non-conformance = 2 and conformance =3) used by some members of the assessment team was found to be effective, though the assessment team noted that defining minor versus major non-conformance may be subjective. Consequently, general guidance on this would be necessary, and in many cases guidance for particular requirements would be useful.</p> <p>As noted in the Observations on the Standard, there is considerable duplication between and, at times, within the chapters, i.e., several requirements requiring a similar outcome. The current structure of the scoring system may result in a company being penalized in multiple chapters for the same non-compliance issue. The assurance system should ensure that it takes into account any duplication that remains in the final version of the Standard.</p>



Assurance System Components	
<b>Mechanisms for Interpretation of the IRMA Standard</b>	Where language in the Standard is more prone to interpretation, IRMA should consider the following mechanisms to ensure consistency across different certified sites: <ul style="list-style-type: none"> <li>• internal review of all audit reports for consistency by qualified, internal IRMA staff; and</li> <li>• a mechanism for the development of an official interpretation by IRMA when auditors, stakeholders, and/or operating companies request clarification.</li> </ul>
<b>Implementation</b>	Due to the complexity of the Standard, IRMA could consider the use of a multi-year pilot period to more thoroughly test the Standard across different sites.
<b>Certification Tools</b>	Several tools could be developed by IRMA in order to support implementation of the Standard by operating companies and stakeholders: <ul style="list-style-type: none"> <li>• development of an training materials that outlines the objectives of IRMA, the key components of the Standard, and the structure of the assurance system for operating companies and stakeholders;</li> <li>• development of a pre-assessment template that could be used by operating companies to organize and prepare for an audit;</li> <li>• the requirement (or option) for a confidential pre-assessment for companies wanting assistance in assessing their readiness for a certification audit.</li> </ul>
<b>Other Components</b>	At an existing mine site, available evidence to demonstrate compliance with the Standard may go back many years, even decades. The assurance system should provide guidance on how far back auditors are to look in order to determine compliance in a certification audit.

## Observations on the Field Test Process

This was the first field test of the Standard and IRMA intends to conduct additional tests of the Standard. The assessment team has several observations of the process:

- Providing documentation and facilitating the on-site interviews required extensive preparation and time of the host company.
- Limiting the scope of the field test (i.e., only testing a portion of the 28 chapters) was appropriate given the available on-site timeframe (one week) as it allowed for a thorough examination of the requirements. It is not recommended to extend the duration of the future field tests.
- Participation of the IRMA contractors who drafted the Standard was helpful in identifying where auditors were not interpreting requirements according to the intent with which they were written. In these cases, recommendations were made to clarify the language, so that the intent was made more apparent.

- This particular field test provided a useful example for how a small-to-medium sized company might perform in the IRMA system (as some outside commenters have queried whether the IRMA program might advantage large multinational companies, which tend to have more resources).
- The Stillwater mine site also provided IRMA with the opportunity to test the draft Standard at an existing mine. This is particularly relevant, given that IRMA will apply both to new and existing mines, and work is being done to identify where the Standard may need to differently accommodate existing mines that cannot meet requirements pertaining to the pre-mining phase.

## Recommendations for the IRMA Standard and Assurance System

The assessment team makes a number of recommendations for the revision of the Standard, as well as for key components of the assurance system that will aid the successful implementation of the Standard.

### The Standard

The next revision of the Standard IRMA should:

- Eliminate duplication within and between chapters. Some areas of focus include:
  - requirements for making data publicly available;
  - requirements for engagement with stakeholders; and
  - baseline data collection and monitoring requirements.
- Review Chapters 5.1 and 5.2 and consider incorporating the requirements that are not already covered elsewhere in the Standard into the other individual chapters. Chapters 5.1 and 5.2 may be able to be eliminated entirely or combined into a single stream-lined Chapter.
- Simplify language as much as possible, without impacting intent of the requirement.
- Review the stringency of requirements that are prescriptive but do not necessarily impact the intended outcome (e.g., requirements for documentation).
- Ensure that if vague or ambiguous phrases like ‘as needed’, ‘reasonably’, ‘to the extent possible’ are used IRMA is comfortable with there being auditor discretion.
- Provide clarity on which requirements apply only to new sites. Review the Standard to ensure that all remaining requirements are achievable, as

written, for existing mine sites.

- Clearly identify the requirements that are barriers for certification if the company cannot demonstrate compliance, and ensure that this was the intent.
- Review definitions and add additional for stock phrases such as ‘independent and/or qualified experts’.
- Remove references to requirements from Standards’ (e.g., EU regulations, IFC etc.), and/or provide guidance on the exact specifications of the other Standards.
- Consider whether a location/mechanism other than a mining company website could be used to provide the public with convenient access to relevant documents as required by the IRMA Standard.

## Assurance System

When developing the assurance system IRMA should:

- Develop mechanisms for formal interpretation of the Standard by IRMA, whereby auditors, companies and/or stakeholders may request clarification on the intent or meaning of the Standard in a certain application.
- Ensure that there is a strong internal IRMA review (this may be delegated to a panel or some other party) of all audit reports, and a mechanism to ensure that findings are consistent across different sites and different locations.
- Develop auditor training materials that include audit process and procedures as well as Standard-specific training on topics such as stakeholder engagement, monitoring, and best practices for particular chapters, e.g., water management, etc.
- Set guidelines for certification bodies on audit level of effort (i.e., the number of auditor days dedicated to the audit) and auditor qualifications.
- Provide auditors with guidance on the time scope (i.e., how far back in time auditors need to go in reviewing evidence) by chapter or requirement, as needed.
- Develop tools for companies and stakeholders, such as guidance on organizing and presenting evidence, training on audit procedures and terminology, and access to examples of conformance for key requirements.

- Require (or offer) a confidential pre-assessment for companies to ensure that they are ready for a certification audit.
- Develop a template (based on the field test template) for use by auditors and companies, including a tab that establishes parameters for: conformance, minor non-conformance and major non-conformance.
- Create guidance on when certain chapters of the Standard may not need to be assessed.

## Field Testing

For future field tests IRMA should:

- Consider a non-North American site.
- Test the chapters of the standard that were not tested in this standard.
- Test the proposed IRMA scoring system in a more focused manner.

## Appendix I: Summary of Auditor Comments by Chapter

<b>Chapter 2.8—Community and Stakeholder Engagement</b>	
<b>Overall</b>	This chapter is generally understandable, relevant and auditable.
<b>Potential unintended barriers to certification</b>	None identified.
<b>Duplication</b>	There is some duplication between requirements in this chapter and others (e.g., 2.9, 2.11) that should be removed.
<b>Clarity</b>	<p>Requirements would benefit from focusing on the outcome to be achieved versus, for example, the company taking ‘all reasonable steps’.</p> <p>Additional definition of terms (e.g., ‘broader community’) would contribute to more uniform interpretations by auditors.</p> <p>For more uniform audit results, it is recommended that ambiguous, unclear and all-encompassing terms be avoided.</p>
<b>Potential for variability in interpretation</b>	There is likely to be a high variability of social contexts encountered at mine sites globally. The non-prescriptive nature of this chapter will create a strong reliance on auditor interpretation in determining whether the intended outcomes of this chapter have been achieved.
<b>Other</b>	<p>Over time IRMA will likely need to develop guidance for operating companies and auditors on expectations for different requirements in this chapter.</p> <p>Additional guidance is needed for some requirements of this chapter regarding their application at existing mine sites.</p> <p>The assurance system should provide guidance to auditors regarding how far back in time auditors should be evaluating compliance.</p>

<b>Chapter 2.9—Obtaining Community Support and Delivering Benefits</b>	
<b>Overall</b>	This chapter is generally understandable, relevant and auditable.
<b>Potential unintended barriers to certification</b>	As written, requirement 2.9.2.1 requires that new mines have broad community support prior to the start of operations. If it is not achieved, there is no allowance for a company to remedy the situation after operations commence. So that site will never be eligible for certification.
<b>Duplication</b>	There is some duplication with other chapters 2.8, 3.3 and 4.1 that should be removed.
<b>Clarity</b>	<p>Language used in this chapter creates room variation in auditor interpretation. For example, interpretation of ‘special care’, ‘reasonable efforts’, ‘priority ecosystem’ and other such terms could lead to a variability in audit results. Variability could be decreased by adding guidance for auditors on expectations and intent.</p> <p>Additional definition of terms (i.e. ‘significant’ and ‘public commitment’) would contribute to more uniform interpretations by auditors.</p>
<b>Potential for variability in interpretation</b>	Due to the non-prescriptive nature of this chapter and the likely high variability in social contexts there will be a strong reliance on auditor interpretation in determining whether the intended outcomes of this chapter have been achieved.
<b>Other</b>	<p>References to IFC requirements were confusing, and these requirements are generally long and convoluted which makes them difficult to implement and to audit.</p> <p>It is recommended that auditor guidance be developed to clarify specific requirements for uniform interpretation by auditors, e.g., 2.9.11, 2.9.3.2, 2.9.3.3.</p> <p>Additional guidance is needed in some requirements of this chapter regarding its application at existing mine sites.</p>

<b>Chapter 2.11—Cultural Heritage</b>	
<b>Overall</b>	This chapter is generally understandable, relevant and auditable.
<b>Potential unintended barriers to certification</b>	None identified.
<b>Duplication</b>	There is some duplication with chapters 2.8 and 2.10 that should be removed.  There was also potential duplication of requirements within the chapter, e.g., 2.11.9.2 could be combined with 2.11.8.1
<b>Clarity</b>	Additional definition of many terms used in this chapter (e.g., ‘internationally recognized practices’, ‘cultural benefits’, ‘financially feasible’, ‘best available technique’, ‘exceptional circumstances’) is needed to facilitate more uniform interpretations by auditors.
<b>Potential for variability in interpretation</b>	Due to the non-prescriptive nature of this chapter and the likely high variability in social contexts there will be a strong reliance on auditor interpretation in determining whether the intended outcomes of this chapter have been achieved. For example, there may be variability in how an auditor interprets whether or not “overall benefits of the project conclusively outweigh the anticipated cultural heritage loss from removal” in 2.11.6.1, or whether or not “avoidance is not feasible” in 2.11.5.1.
<b>Other</b>	Additional guidance is needed regarding the application of this chapter, or specific chapter requirements, at existing mine sites.

**Chapter 3.1—Water Quality**

<b>Overall</b>	<p>This chapter as originally written is generally understandable, relevant and auditable.</p> <p>In addition to the original version of the chapter, IRMA also tested sample language that would allow companies to use a risk-based (risk assessment/management) approach to meeting IRMA’s water quality protection objectives. The alternative language based on a risk assessment approach, as currently written, was found to be lacking enough guidance to be auditable. The assessment team identified that if this approach is used, guidance would be needed regarding how to determine ‘acceptable risks’, and what actions would be deemed adequate if a risk was identified as unacceptable. Additional concerns were raised regarding the amount of time required to fully assess compliance against these requirements.</p>
<b>Potential unintended barriers to certification</b>	None identified.
<b>Duplication</b>	There is duplication with other chapters regarding making monitoring results publicly available that should be removed.
<b>Clarity</b>	Language is clear, except where noted in the following two boxes.
<b>Potential for variability in interpretation and outcomes</b>	<p>The original version is fairly prescriptive and should result in consistent outcomes across certified sites.</p> <p>The alternative model is focused on an assessment of risks. There is little guidance on how risks are to be assessed, which creates uncertainty regarding future interpretation and variability in intended outcomes at IRMA-certified sites.</p>
<b>Other</b>	<p>IRMA should consider developing guidance on what constitutes ‘best practicable science’. Also, it is recommended to develop auditor guidance for specific requirements, e.g., 3.1.3.2, to enable uniform interpretation by auditors.</p> <p>The assurance system should provide guidance to auditors regarding how far back in time auditors should be evaluating compliance with the requirements.</p> <p>Additional guidance is needed in some requirements of this chapter regarding application at existing sites. For example, 3.1.2.2. requires water quality modeling for new projects, but there are no modeling requirements for existing sites.</p>



<b>Chapter 3.2—Water Quantity</b>	
<b>Overall</b>	This chapter is generally understandable, relevant and auditable.
<b>Potential unintended barriers to certification</b>	None identified.
<b>Duplication</b>	There is duplication with other chapters (e.g., 3.1, 3.3, 4.1 and 5.3) that should be removed. There is additional duplication with respect to monitoring that should either remain in this chapter or be kept in 5.2, but not both.
<b>Clarity</b>	Language is clear; there are some minor points that require clarification, such as the use of terms such as ‘all’, and ‘shall establish’.
<b>Potential for variability in interpretation</b>	This chapter is fairly prescriptive, which should result in consistent outcomes across certified sites.
<b>Other</b>	None

<b>Chapter 3.3—Mine Waste Management</b>	
<b>Overall</b>	The requirements in this chapter are relevant, but work needs to be done to make the requirements more understandable, e.g., defining certain terms, simplifying language to reflect intent. Once this is done, the requirements will be more auditable.
<b>Potential unintended barriers to certification</b>	Some requirements in this chapter set a high bar that may present a barrier for many in the industry to meet. For example, 3.3.1.2. requires companies to disclose the amount of toxic constituents generated and released from its mine as per the rules of the United States (U.S.) Environmental Protection Agency’s Toxic Release Inventory. While companies located in the U.S. may be familiar with this disclosure system, it may prove onerous without having an obvious benefit for non-U.S. companies.
<b>Duplication</b>	There is duplication with chapters 3.1 and 3.2 that should be removed.
<b>Clarity</b>	<p>Language is, for the most part, clear. The use of ‘if practicable’, however, creates room for differences in interpretation and variability in outcomes. Also, requirements that state ‘<u>all</u> structures/plans’ if interpreted literally, place a potentially unintended burden on operating companies.</p> <p>There are other terms in this chapter that require definition, e.g., ‘low permeability subgrade’.</p>
<b>Degree of potential for variability in interpretation</b>	This chapter is fairly prescriptive and should be able to be consistently interpreted, if additional clarification is provided.
<b>Other</b>	<p>This chapter requires that facilities be designed to accommodate changes caused by climate change. Additional guidance is needed on what this would entail.</p> <p>Additional guidance is needed in some requirements of this Chapter regarding its application at existing mine sites. For example, in 3.3.7.1. states that “Waste rock facilities shall be designed to minimize seepage to groundwater.” The intent was that this applies at new facilities, but should existing facilities that did not design to minimize seepage to groundwater be required to address the issue at all, e.g., through management/mitigation practices?</p>

<b>Chapter 3.4— Air Quality</b>	
<b>Overall</b>	<p>This chapter is generally understandable, relevant and auditable.</p> <p><b>Note:</b> this chapter was only partially reviewed, due to time constraints. Therefore, the observations below do not reflect a on the entire chapter.</p>
<b>Potential unintended barriers to certification</b>	None identified.
<b>Duplication</b>	This chapter did not overlap with other chapters.
<b>Clarity</b>	This chapter relies heavily on third-party standards (e.g., EU Air Quality Standards), which creates some uncertainty as the EU standards may be modified, and creates a burden on all parties to refer to the most up-to-date versions of those standards.
<b>Potential for variability in interpretation</b>	This chapter is fairly prescriptive and, therefore, easily interpreted. However, additional clarification is needed to assess compliance when specific parameters to be measured are not covered by legal requirements.
<b>Other</b>	None identified.

**Chapter 4.1—Reclamation and Closure**

<b>Overall</b>	This chapter is generally understandable, relevant and auditable.
<b>Potential unintended barriers to certification</b>	None identified.
<b>Duplication</b>	There is duplication with other chapters in terms of publicly available information that should be removed.
<b>Clarity</b>	This chapter is clear. In several requirements, there is room for differences in interpretation where language such as 'where feasible' or 'financially viable' is used.
<b>Potential for variability in interpretation</b>	This chapter is prescriptive regarding required planning processes but is open to some interpretation with respect to outcomes, which may lead to some variability across sites.
<b>Other</b>	<p>The three-year monitoring cycle may be impractical and burdensome. Five years was suggested as a potential alternative.</p> <p>Additional clarification will be needed for application at sites outside the United States.</p> <p>It is recommended that auditor guidance/training materials be developed to enable greater understanding of specific requirements, e.g., 4.1.9.5.</p>

<b>Chapter 5.1—Environmental and Social Impact Assessment</b>	
<b>Overall</b>	This chapter is generally understandable and auditable. Some assessment team members questioned the relevance of this chapter as there was considerable overlap with requirements in other chapters.
<b>Potential unintended barriers to certification</b>	Requirements for an environmental impact assessment and baseline monitoring may be a barrier to certification for sites that did not do this to the degree required by the Standard prior to the start of operations.
<b>Duplication</b>	The assessment team found that many of the core requirements of this chapter are also located in other chapters.
<b>Clarity</b>	Language in this chapter creates some room for interpretation through the use of vague words such as ‘potentially significant’.
<b>Potential for variability in interpretation</b>	There is no guidance in the Standard as to what social/environmental impacts are to be assessed, and thus there is a high likelihood for significant variability in outcomes.
<b>Other</b>	<p>The measurement of cumulative impacts is not well understood, and without clear guidance may present a challenge to some companies, and possibly a barrier to certification.</p> <p>Additional guidance is needed in some requirements of this chapter regarding its application at existing mine sites.</p> <p>The assurance system should provide guidance to auditors regarding how far back in time auditors should be evaluating compliance.</p>

### Chapter 5.2—Environmental and Social Impact Monitoring

<b>Overall</b>	This chapter is generally understandable and auditable. However, there is some question as to the relevance of this chapter as it seems to duplicate the requirements of other chapters.
<b>Potential unintended barriers to certification</b>	Requirements for environmental impact assessment and baseline monitoring may be a barrier to certification for sites that did not do this to the degree required in this chapter.
<b>Duplication</b>	Many of the requirements of this chapter are also located in other chapters, making this chapter mostly redundant. Monitoring of each potential impact could be added as a requirement to other individual chapters.
<b>Clarity</b>	Language in this chapter creates some room for interpretation through the use of ‘special care’, ‘reasonable efforts’, ‘priority ecosystem’, etc., which may lead to variability in outcomes.  Additional definition of terms (e.g., ‘appropriately trained staff’) would contribute to more uniform interpretations by auditors.
<b>Potential for variability in interpretation</b>	There is no guidance in the Standard as to what social/environmental impacts are to be assessed, and thus there is a high likelihood for significant variability in outcomes across certified sites.
<b>Other</b>	The requirements are largely outcome focused, which allows greater flexibility for operating companies to deal with variable situations and stakeholders. This chapter requires that monitoring recur every three years, which may present a challenge for some companies.  Additional guidance is needed regarding the application of some requirements at existing sites.  The assurance system should provide guidance to auditors regarding how far back in time auditors should be evaluating compliance.

<b>Chapter 5.3—Grievance Mechanism and Access to Other Remedies</b>	
<b>Overall</b>	This chapter is generally understandable, relevant and auditable.
<b>Potential unintended barriers to certification</b>	None identified.
<b>Duplication</b>	There is duplication with chapters 2.8, 5.1, 5.2 that should be removed.
<b>Clarity</b>	This chapter is clear.
<b>Potential for variability in interpretation</b>	This chapter is fairly non-prescriptive and there will likely be a high level of variability in implementation and outcomes. This may be appropriate as different stakeholders and different situations may require different processes.
<b>Other</b>	It was unclear if the waiving of certain rights as part of agreements negotiated between communities (not individuals) and companies would preclude certification (i.e., as per requirement 5.3.3.1).  Guidance on the scope of the grievance mechanism is required (i.e., does it cover company employees and contractors).