Safety in the cement industry: 
Guidelines for measuring and reporting 

Updated October 2008 

Version 3.0
Foreword to the August 2008 updated version.

All CSI members have by now acquired considerable experience in reporting their safety data. However, in that process, it was identified that some of the original definitions needed clarification in order to ensure sector-wide reporting consistency.

These clarifications were developed in several Task Force 3 meetings, and it was then delegated to a sub-group to finalize these clarifications in May 2008. The clarification process was satisfactorily completed in September 2008, and the agreed clarifications are listed in Appendix 1, each relating to the bracketed reference numbers in the original text. It is emphasized that none of the original definitions have changed, they have only been further clarified.

Collated aggregated CSI safety data for the years 2003 to 2007 is included for benchmarking purposes in Appendix 2. As can be seen, the cement sector has made good progress on reducing lost time injuries, however similar progress has yet to be achieved on fatality reductions. All CSI members are strongly committed to safety improvement, and are determined to achieve progress in the years ahead.

CSI members have also committed to independent verification of their safety data, and the agreed guidelines are included as Appendix 3. Some CSI members already undergo extensive verification, while others are now just starting on that process.

Members are also gradually extending safety reporting to include associated activities, such as aggregates and readymixed concrete. It is hoped that these associated sectors will also universally adopt the CSI safety definitions as their reporting standards in order to give consistent safety reporting across the building materials sector.
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The Cement Sustainability Initiative (CSI)

Background
Cement is one of the most widely used substances on the planet. Each year, nearly three tons of concrete (containing 10-15% cement) are consumed for each man, woman and child. Making cement is an energy and resource intensive process with both local and global impacts. Recognizing these facts, several cement companies initiated the Cement Sustainability Initiative (CSI) as a member-sponsored program of the World Business Council for Sustainable Development (WBCSD). Currently, eighteen cement companies, who together represent more than half the worldwide industry outside of China, sponsor the Initiative. Begun in late 1999, the Initiative has since enabled:

1 Independent research on the current performance of the industry and the major sustainability issues it faces;
2 A series of facilitated stakeholder dialogues in seven cities (Cairo, Curitiba, Bangkok, Lisbon, Brussels, Washington DC, and Beijing);
3 A set of independent recommendations to improve performance; and
4 An industry Agenda for Action to address the issues raised.

Current status
Major research reports were completed in March 2002, primarily by the Battelle Memorial Institute in the US, under contract with the WBCSD. An accounting protocol for reporting CO₂ emissions was developed in cooperation with the World Resources Institute, and is being updated in 2008. An industry action plan developed by the participating companies, and signed-off by their business leaders, was published in July 2002: The Cement Sustainability Initiative, Our Agenda for Action. Following this, CSI Progress Reports were published in 2005 and 2007 (www.csiprogress2007.org), and summary materials on all the CSI's work are available in nine languages through Earthprint, www.earthprint.com, or on the project website, www.wbcsdcement.org

Currently, seven Task Forces, each chaired by one or more of the participating companies, are working on issues identified in the Agenda for Action - primarily good practice guidelines, tools and procedures to be used by all CSI companies at their operating facilities, and made available on a world-wide basis for other cement companies to adapt as desired. Topics include:

- **Climate protection** (e.g. work on carbon emissions reduction through a Sectoral Approaches, a global database of CO₂ emissions by cement companies)
- **Employee health and safety** (e.g. collection of good practice examples in the sector, ongoing analysis and improvement of statistics)
- **Responsible use of fuels and raw materials** (development and implementation of good practice guidelines completed)
- **Emissions monitoring and reporting** (currently focusing on mercury emissions monitoring)
- **Concrete recycling** (status report published in 2008)
Local impacts on land and communities (e.g. rehabilitation plans for operating quarries, guidelines for environmental and social impact assessment)

Reporting and communications (e.g. use of Key Performance Indicators, verification of CO₂ emissions data)

Several of the guidelines above have involved active stakeholder consultations and partnerships - both facilitated stakeholder workshops and online dialogues in 2006 and 2008 - and international NGOs provide ongoing expertise to specific task forces on an invitation basis. An external Assurance Group oversees the program, serving as advisor and "referee". Dr. Mostafa Tolba (former Director of UNEP) chairs the group, which includes Claude Martin (former Director, WWF International), Claude Mandil (former Executive Director of the IEA), and Jim MacNeill (former Secretary General of the Brundtland Commission).

Performance goals and targets
Work under this Initiative was divided into two areas: joint projects (such as the guidelines development) and individual company activities. The Initiative has not and does not plan to establish group targets for all the participating companies. This choice was made for two reasons: first, individual companies are far better able to set appropriate targets and timetables for their organizations. In a global Initiative such as this, different companies and different countries will necessarily have different priorities and resources available.

Meaningful targets can only be set in reference to meaningful company values and resources.

Second, from a competitive standpoint, competition laws strictly limit the kinds of activities companies can engage in together. Several of the subject areas of the initiative are also strategic business issues for the companies involved. Group target setting could pose potentially serious legal issues.

Employee health and safety
Ensuring healthy and safe working conditions for employees and contractors is one of the most important issues for the cement industry. We recognize that more attention should be paid to this area across the whole industry and we are committed to playing a full part in that process. For that purpose, Task Force 3 on Health and Safety, with participation from all 18 CSI members, continues to address safety improvement.

From what we do know, the fatality and injury rate in our industry is higher than others such as petrochemicals and petroleum refining. We regard this as unacceptable and believe that it is affecting the reputation of the cement industry as a whole.

This report provides standard, cross-company systems to measure, monitor and report on health and safety performance, which individual companies can then implement.
The purpose of this document is to ensure the accurate register of all fatalities and occupational injuries of the cement company members of CSI in order to have the same basis on which to produce a consolidated report of safety indicators.

> This consolidated CSI report will allow a common platform able to report industry-wide figures in order to compare our industry against others and to have proper benchmarking. More importantly, the CSI is committed to improving the industry safety record. So, another objective of having the same reporting platform is to have a starting point and subsequent tracking each year of these indicators to evaluate our progress in reducing accidents and injuries to our employees.

> To ensure achievement of this objective, each member company will share an annual safety report with the CSI using the definitions and indicators specified in this document. The coordinator of the CSI Health and Safety Task Force will consolidate the information into a single report including analysis of incident causes, frequency and trends.

A third objective is to encourage transparent and consistent future public safety reporting among all CSI members, and thereby to encourage excellence in safety performance throughout the industry.

> Each CSI member company may, of course, decide to publish its safety data within its Annual Report or Corporate Sustainability Report. Such reporting should ideally be in accordance with the definitions and indicators used in this document. The CSI actively supports publication of safety data by its members as part of the industry’s wider social responsibility commitments.
Directly employed
Own employees, including full-time, part-time and temporary [1] employees, the latter two estimated as full-time equivalents. These include employees in all companies where there is management control [2] and companies where there are management/technical [3] agreements.

Indirectly employed [4]
Contractors and sub-contractors [5], also estimated as full-time equivalents. This includes all individuals, firms or corporations contracting for performance of specified work [6], either on a short-term (for a specific job) or long-term basis (such as drivers or maintenance crews).

Third party
Any person not categorized as directly or indirectly employed. Third parties typically include customers and visitors to company locations (whether specifically invited or not). Also included are drivers or passengers involved in off-site motor accidents with company vehicles, but only if there is company culpability [7].

Fatality
A death resulting from a work-related accident, with no time limit between the date of the accident and the date of death. Fatalities are reported for directly employed, indirectly employed and third parties. Excluded in all cases are all fatalities in private or public transport to and from work [8], fatalities due to criminal acts [9], and fatalities due to natural causes [10].

Fatality rate
Number of fatalities in a year per 10,000 people directly employed.

Lost Time Injury (LTI)
A work-related injury causing the absence of one or more working days (or shifts), counting from the day after the injury, before the person returns to normal or restricted work [11]. LTIs are reported for directly employed and indirectly employed; LTIs to third parties are not reported as there is no basis for counting lost working days. Excluded for both directly and indirectly employed are injuries in transport to and from work [8], injuries due to criminal acts [9], and injuries due to natural causes [10].

LTI frequency rate
Number of LTIs in a year per million hours worked.

LTI severity rate
Number of Lost Days [12] in a year per million hours worked.

Worked hours
Actual hours worked [13].
Definitions regarding exclusion or inclusion of data in CSI safety indicators [14]:

Several member companies operate several different business sectors (e.g., asphalt, ceramics, chemicals, aggregates etc.) in addition to cement production. For the purposes of comparability within the Cement Sustainability Initiative, the CSI companies decided that the safety indicators and reporting criteria used would initially only be those directly linked with the cement manufacturing process as defined below.

The following activities are included in the scope of cement manufacturing process (see figure on following page) when they are under the direct or indirect management [15] of the company:

- Quarry operations for cement production, if they are under the management control [15] of the cement company or plant.
- All operations in cement manufacturing plant from crushing to dispatch/shipment, including any production-related off-site activities; e.g., the preparation, treatment, handling and delivery of conventional and alternative fuels and other raw materials [16].
- Cement milling and/or terminal/distribution silo facilities (i.e. receiving clinker and/or producing or distributing cement).
- All office-based personnel directly related with these activities, including administrative and sales employees, managers and directors, even when they are on business outside the plants. Also included are any headquarters office staff directly associated with the cement manufacturing activity.
- Cement and clinker delivery logistics to terminal/distribution silo facilities and to customers are included, if carried out by directly or indirectly employed personnel [6]. Third party fatalities resulting from such activity are included only where there is company or employee (direct or indirect) culpability [7].

Cement and clinker delivery logistics are excluded from this definition when the customer collects these products. Aggregates and ready mixed concrete production, and any other activities beyond the cement manufacturing process are also initially excluded. (Separate external safety reporting for these activities is encouraged but optional at this time).

The reporting protocol defined in this document does not include occupational disease [17], defined as a condition produced in the work environment over a period longer than one workday or shift. Usually such a disease is due to repetitive factors over a period of time. It may result from systemic infection, repeated stress or strain, chronic exposure to toxins, poisons or other ongoing aspects of the work environment.
Definitions of the safety indicators to report as CSI Group

Fatalities:
Number of fatalities and fatality rate, directly employed
Number of fatalities, indirectly employed (contractors & subcontractors) and third parties

Lost Time Injury (LTI):
Lost Time Injury (LTI) frequency and severity rate, directly employed
Number of LTIs, indirectly employed (contractors & subcontractors)

1. Number of fatalities and fatality rate for directly employed

Number of fatalities for directly employed

Fatality rate (directly employed) =
(Number of fatalities in a year / number of directly employed) x 10,000 [18]

Exclusions:
> All fatalities resulting from travel to and from work in private or public transport [8].
> Murders/deaths resulting from criminal actions and deaths by suicide [9].
> Deaths from natural causes without a specific work-related cause [10].

2. Number of fatalities for indirectly employed

These are recorded only when linked to cement activities (as defined on pages 6 and 9), i.e. if a customer arranges own transport or sends a contractor to collect products, any associated fatality that occurs is not counted except if it happens on a cement manufacturing site [19]. It is then considered to be a third party fatality.

Number of fatalities (indirectly employed) =
Number of fatalities of indirectly employed resulting from work-related incidents in a year.

Fatality rate (directly employed) =
(Number of fatalities in a year / number of directly employed) x 10,000 [18]
3. Number of fatalities for third parties

These are recorded only if they arise from an incident in cement manufacturing (see above or pages 6 and 9) \[19\]. Offsite traffic accident fatalities are included only if there is company or employee (direct or indirect) culpability \[7\] and are only for cement manufacturing activities.

\[\text{Number of fatalities (third party)} = \frac{\text{Number of deaths of civilians resulting from incidents related to cement activities (as defined in the scope of cement manufacturing process)}}{\text{(Total actual hours worked in a year)}}\]

4. Lost Time Injury (LTI) Frequency Rate (LTI FR) for directly employed

General: The frequency rate is the number of Lost Time Injuries per 1,000,000 hours worked.

\[\text{Frequency Rate} = \frac{\text{Number of Lost Time Injuries} \times 1,000,000 \text{ hrs (1 million hrs)}}{\text{(Total actual hours worked in a year)}}\]

Note 1: Fatalities and Lost Time Injuries (LTIs) are counted separately. A fatality is not double-counted as a LTI.

Note 2: If a company has already adopted use of differently defined frequency rates, it may of course continue to use these internally, however it will report to the CSI (and optionally in public) using the above definition.

5. LTI Severity Rate (LTISR) for directly employed

In principle, the Severity Rate is calculated as the number of lost days per 1,000,000 hours worked.

\[\text{Severity Rate (SR)} = \frac{(\text{Number of Lost Days}) \times (1,000,000 \text{ hrs})}{(\text{Total number of hours worked in a year})}\]

It will be necessary to specify whether the Lost Days are counted on the basis of calendar days lost or working days lost.

Statistical calculation has demonstrated that the Lost Calendar Day basis is = 1.5 times the Lost Working Day basis, within a +/- 3% accuracy.

Therefore it is agreed that:

LTI Severity Rate (basis of worked days lost) x 1.5 = LTI Severity Rate (basis of calendar days lost).

To calculate the Severity Rate precisely, there should be a year-end adjustment to include either:

a \[20\] Estimated number of Lost Days carrying forward into the following year; or

b \[20\] Actual number of Lost Days carried forward from LTIs in the previous year.

There is general agreement that the counting of Lost Days ceases with a return of the injured person to Restricted (or Light) Work or Normal Work \[20\].

6. Number of LTIs for indirectly employed

Recorded only when linked to the activities of cement manufacturing (as defined previously) \[19\].

\[\text{LTIs (indirectly employed)} = \frac{\text{Number of LTIs in a year of indirectly employed}}{}\]

Note 1: If the customer arranges own transport or sends a contractor to collect products, any injury sustained during the transport/pick-up off-site is the responsibility of the customer and is not counted.

Exclusions: Excluded for both directly and indirectly employed are injuries that occur in private or public travel to and from work \[8\], injuries due to criminal acts \[9\], injuries due to natural causes and occupational diseases \[10\].
Injuries: facility premises

In many countries, government regulations define the types of incidents which must be legally reported.

Generally, all injuries that result from an event or exposure on the facility's premises are considered work-related. The facility premises consist of the total establishment, including the primary work facility, administration buildings, hallways, washrooms, etc.

An exception to this rule is if an employee exhibits signs or symptoms of a non work-related event or exposure while on the work-site (natural causes). This situation should, of course, be addressed medically.

Some work-related incident clarification and reference criteria:

1. If an employee is injured on the facility premises while engaged in horseplay (rough & tumble, fooling around, play-fun), the injury is recordable. Of course such horseplay should be strongly discouraged.

2. If an employee is injured on the facility premises while under the influence of alcohol or drugs, the injury is also recordable, and may lead to disciplinary procedures depending on company policies in place and legal regulations.

Injuries: off-facility premises

Some reference criteria for off-facility incidents:

1. If an employee has reported to work, and is injured while off the facility premises performing work-related activities, such as purchasing a company paid lunch, obtaining supplies or carrying out general company errands, the injury is considered work-related.

2. If an employee who with permission leaves work, is injured off-site while at lunch, and the luncheon is not work related, the injury is not considered work-related.

Restricted (or light) work after an injury

Provided it is legally acceptable in the country concerned and medically approved, it is beneficial for both the injured employee and the company to have the employee initially return to restricted/light work duties while the natural healing and recovery process is completed.

When an injured employee returns to restricted/light work, the LTI is over. If the return is the day/shift immediately after an injury, then there is no LTI as no days are lost.

It should be noted however that national incident and/or accident reporting requirements might be different from the CSI definitions described above. In such cases, the national reporting requirements should always be met [21].

Safety training on the procedures for working in confined areas at Jura Cement, Wildegg facility.
Consolidated CSI reporting and communication

Gathering of safety data from CSI member companies and creation of the report

Every company member of the Cement Sustainability Initiative will elaborate their own annual safety indicator report according to the definitions and formulas in this document and will share its report for the previous calendar year among all CSI members during the month of May every year.

The person designated to make the consolidated report will combine all the individual reports and will create the Consolidated Safety Indicator Report. This will be produced during the month of June every year.

Criteria regarding the use and publication of CSI safety indicators

The consolidated CSI report will not exhibit figures comparing individual, named cement companies.

The figures must exhibit all the cement companies reporting as a group in order to make comparisons between the CSI group and the other sectors, or show trends and progress within the CSI group between years.

Companies not involved in the CSI are encouraged to collect and report their data.

Independent verification of data

CSI members have agreed to independent verification of their safety data going forward to ensure that the process is transparent. Each member oversees its own independent verification process, with a credible third party assurance company.
Appendix 1 - Definitional Clarifications

[1] Temporary employees should also include individuals hired on a daily or hourly basis.

[2] The reporting responsibilities relating to the degree of management control are as follows:

> The CSI Member with a controlling position in a company (equal to or greater than 50% shareholding) is required to report for 100% of that company: CSI Members with minority positions should not double-report that company.

> In case of a 50/50 joint venture, where both parent-companies are members of the CSI, only the company with H&S management responsibility should report the safety figures for 100% of that company, in order to avoid double-reporting.

> In case of a 50/50 joint venture, where only one parent-company is a CSI Member but does not have safety management responsibility, that CSI Member is not obliged to report safety data for that company.

> If the controlling shareholder is not a CSI Member, then the CSI Member/s in minority position/s is/are not obliged to report safety data for that company.

[3] In cases where management/technical agreements effectively give management control to a minority shareholder, then the reporting provisions of a controlling position in [2] above apply.

[4] Safety data, including LTIs and fatalities, should be reported for all Indirectly Employed (contractors and sub-contractors).

[5] Sub-contractors are defined as contractors of contractors.

[6] Where such specified work relates to transport, the following rules apply:

> Where the company is responsible for the collection or delivery of goods, and contracts a transport company to do this, the involved drivers of these trucks are deemed to be indirect employees.

> In all cases where the vehicle bears the logo of the company or of its subsidiaries, the drivers must be regarded as indirect employees.

> However, where transport is carried out as an independent service (for example by a courier), where the CSI Member has no safety management control, the related drivers may be regarded as third parties.

[7] Culpability is understood to mean fault for causing the incident as established beyond reasonable doubt through investigations by the company and/or local independent authorities.

[8] Any fatality or LTI in transport to/from work in any vehicle under company responsibility (for example a company or contracted bus) must be reported.

[9] Criminal acts may also cover:

> A direct or indirect employee fatality or LTI caused by criminal fault of a third party driver (for example if drunk) if independently proven or subsequently prosecuted by police or courts, and only when the company, its direct or indirect employees and vehicles, are not in any way at fault.

> Acts of war or terrorism, as well as personal attacks and suicide.
Natural causes may include events like an earthquake or tsunami, as well as human events such as a heart attack.

If two (or more) people are injured in any accident, then the event is to be counted as two (or more) LTIs, as also the Lost Days for each injured individual.

Lost Days may be reported on a Calendar or Working Day basis, but the basis chosen must be clearly stated in reporting: as already established in the definitions Section 5, it is agreed that these bases are linked by the "Masterson Factor" where Lost Working Days x 1.5 = Lost Calendar Days.

Actual hours worked exclude time out due to absenteeism and holidays: if exact hours worked are not recorded then these are estimated based on actual working hours.

In the compilation and reporting of safety data, the following rules also apply:

- There should be no double-reporting of fatalities or LTIs by CSI Members. If CSI Member "X" has a fatality or LTI on a CSI Member "Y" location, then only CSI Member "X" reports that data. If "X" is not a CSI Member, and "Y" is, then "Y" reports it as a third party fatality.
- When a CSI Member acquires another company, its safety data should be included from the date of acquisition, or as soon as is practicable.

This is understood to mean as where there is safety management control.

This also includes cement plant construction and reconstruction projects.

Reporting of occupational diseases should be kept separate from reporting Safety LTIs. Occupational diseases, for example silicosis, relate to longer-term workplace exposures, and do not relate to specific workplace accidents.

In order to compare Fatality Rates with those of other sectors which are calculated on a manhour basis, it may be assumed that 10,000 employed = 20 million manhours.

Data may of course also be optionally reported for non-cement activities. Also, if it is possible to record the numbers of manhours and Lost Days for LTIs for indirectly employed, then the corresponding Frequency and Severity Rates may optionally be also reported.

The following rules also apply in the computation of Lost Days:

- If, after the injured person has returned to work, further Lost Days occur later due to a relapse (or for example due to corrective surgery), then those additional Lost Days must be counted in the Severity Rate calculation for the original LTI.
- Lost days have to be counted as long as the person is on the payroll of the company, even if the employee receives money from another body, for example from health insurance funds.
- Only actual lost days should be counted: in some jurisdictions, there are local reporting conventions which arbitrarily add further lost days in national reporting as punishment for more severe LTIs: these conventions should not be adopted when reporting under CSI rules.
- If in the case of an incapacitating injury, where the injured person chooses not to return to work, then the counting of Lost Days should terminate when that agreement is reached.
- Under either option (a) or (b) in Section 5, it may be deduced that the maximum number of Lost Days counted for any single LTI cannot exceed a maximum equivalent of two years' absence.

Data should of course be reported to the CSI (and in public reports by the company) according to CSI definitions.
### Appendix 2 - Aggregated CSI Safety Data 2003 - 2007

<table>
<thead>
<tr>
<th>TF3 KPIs (Cement only)</th>
<th>Year 2003</th>
<th>Year 2004</th>
<th>Year 2005</th>
<th>Year 2006</th>
<th>Year 2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number CSI Members Reporting</td>
<td>11</td>
<td>14</td>
<td>16</td>
<td>18</td>
<td>18</td>
</tr>
<tr>
<td>Total directly employed</td>
<td>130,752</td>
<td>138,940</td>
<td>148,684</td>
<td>172,133</td>
<td>191,170</td>
</tr>
<tr>
<td>Millions manhours, directly employed</td>
<td>246m</td>
<td>269m</td>
<td>286m</td>
<td>372m</td>
<td>406m</td>
</tr>
<tr>
<td>Number of LTIs, directly employed</td>
<td>1,651</td>
<td>1,585</td>
<td>1,699</td>
<td>1,381</td>
<td>1,386</td>
</tr>
<tr>
<td>LTI Frequency Rate directly employed</td>
<td>6.71</td>
<td>5.88</td>
<td>5.95</td>
<td>3.71</td>
<td>3.41</td>
</tr>
<tr>
<td>Number of Lost Days (calendar) directly employed</td>
<td>No data</td>
<td>No data</td>
<td>69,074</td>
<td>67,035</td>
<td>62,662</td>
</tr>
<tr>
<td>LTI Severity Rate (calendar) directly employed</td>
<td>No data</td>
<td>No data</td>
<td>242</td>
<td>180</td>
<td>154</td>
</tr>
<tr>
<td>Number of LTIs, indirectly employed</td>
<td>652</td>
<td>739</td>
<td>835</td>
<td>1,199</td>
<td>1,285</td>
</tr>
<tr>
<td>Number of fatalities, directly employed</td>
<td>28</td>
<td>27</td>
<td>22</td>
<td>25</td>
<td>33</td>
</tr>
<tr>
<td>Fatality Rate (per 10,000 directly employed)</td>
<td>2.14</td>
<td>1.94</td>
<td>1.48</td>
<td>1.45</td>
<td>1.73</td>
</tr>
<tr>
<td>Number of fatalities, indirectly employed</td>
<td>32</td>
<td>54</td>
<td>41</td>
<td>58</td>
<td>87</td>
</tr>
<tr>
<td>Number of fatalities, third parties</td>
<td>21</td>
<td>11</td>
<td>12</td>
<td>6</td>
<td>11</td>
</tr>
</tbody>
</table>
Appendix 3 - Guidelines for Verification of CSI Safety Data

In order to increase transparency, reliability and accuracy of reporting of Safety KPIs to stakeholders, it is proposed to have Safety KPIs independently verified in accordance with the following guidelines:

<table>
<thead>
<tr>
<th>Area</th>
<th>Moderate or Limited (or <strong>Negative</strong>) Assurance or Verification</th>
<th>Reasonable Assurance (or *<strong>Positive</strong>) or Verification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Verifier Reputation</td>
<td>The verifier should be a nationally recognized and reputable verification authority.</td>
<td>The verifier should be internationally recognized and accredited to appropriate standards.</td>
</tr>
<tr>
<td>Scope of Verified Data</td>
<td>The verified data should include all the agreed CSI Cement Safety KPIs (including Fatality Rates and LTI Frequency and Severity Rates).</td>
<td>The scope of verification may optionally extend to all Activities and also include safety policy, its implementation, safety improvement programs, and targets.</td>
</tr>
<tr>
<td>Scope of Central Verification</td>
<td>The verification should cover the process of collation of the CSI Member Safety KPIs from all managed cement-activity sites within that Company, and calculation of the overall CSI Member Cement Safety KPIs.</td>
<td>The scope may also cover all other activities (aggregates, readymix etc), as well as the data for contractors, joint ventures, etc.</td>
</tr>
<tr>
<td>Scope of Site Verification</td>
<td>The verification should also include checking of the accuracy and quality of source data from representative sites, through site visits by the verifier, and associated examination of site accident records. The sites to be visited should be decided by the independent verifier.</td>
<td>The number of sites may be increased to give a more statistically reliable verification statement.</td>
</tr>
<tr>
<td>Verification Principles</td>
<td>In the central and site assessments, the verifier should adhere to the established verification principles of Scope, Materiality, Completeness, Accuracy, Neutrality and Comparability.</td>
<td>The verification principles may be those laid out in the AA1000 Assurance Standard, ISAE 3000, GRI G3, or a similar standard.</td>
</tr>
<tr>
<td>Verification Statement</td>
<td>The verifier should provide to the CSI Member a verification statement summarizing the conclusions, including any recommendations for improvement.</td>
<td>This statement should be included in the CSI Member’s public report (such as in CSR Reports).</td>
</tr>
<tr>
<td>Commencement</td>
<td>This verification process should ideally be initiated (if not already done) by all CSI Members in 2008, verifying their 2007 Safety Data, and then be carried out least every 3 years, ideally annually.</td>
<td>Verification, ideally in each year, should be completed as early as practicable, latest by September 1.</td>
</tr>
</tbody>
</table>

Note 1: From a practical perspective, Safety KPI verification may be more efficiently carried out by the same verifier and at the same locations as for CO₂ verification.

Note 2: Inspections by authorities like MSHA/OSHA, or reviews by GRI, would generally not provide adequate assurance on the quality of the safety data reporting.

Note 3: **Negative statement means that at least the verifier has found no significant errors or false claims in safety data. **Positive statement means that, on the basis of more detailed assessment, the verifier can provide good assurance as to the correctness of the data.
About the WBCSD

The World Business Council for Sustainable Development (WBCSD) brings together some 200 international companies in a shared commitment to sustainable development through economic growth, ecological balance and social progress. Our members are drawn from more than 30 countries and 20 major industrial sectors. We also benefit from a global network of about 60 national and regional business councils and partner organizations.

Our mission is to provide business leadership as a catalyst for change toward sustainable development, and to support the business license to operate, innovate and grow in a world increasingly shaped by sustainable development issues.

Our objectives include:

> Business Leadership - to be a leading business advocate on sustainable development;
> Policy Development - to help develop policies that create framework conditions for the business contribution to sustainable development;
> The Business Case - to develop and promote the business case for sustainable development;
> Best Practice - to demonstrate the business contribution to sustainable development and share best practices among members;
> Global Outreach - to contribute to a sustainable future for developing nations and nations in transition.

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