Cement Sustainability Initiative (CSI)

TASK FORCE 3 “Health and Safety”

Driving Safety Initiative

Paul Corbin, CSI TF3 Co-Chair, October 21, 2010
CSI Driving Safety Initiative

- Launched October 2009 by 18 CSI CEO’s
- Identified together with Contractor Safety as two fatality prevention initiatives needed to improve industry safety performance
- CEO Recommendation:

  “to develop a set of driving safety good practices to be adopted and implemented by all CSI member companies”

- Practices based on root causes of CSI fatal driving incidents
- Incorporate international road safety expertise and internal industry good practices
- Applicable to all cement value chain and light and heavy vehicles
- Company-wide implementation of the practices across all regions and all activities by 2015
- Regular public reporting on progress by all companies
- Leadership commitment – practices signed by all CEO’s
CSI – Fatalities by Root Cause

- Root cause analysis of CSI driving-related fatalities (2007, 2008, 2009) showed trends in 4 key areas:
  - **Driver** – Driver behaviour (rule breaking), certification and training
  - **Vehicle** - safety features, loading, pre-trip checks
  - **Journey** – road conditions, signage, journey risk management
  - **Leadership** - Inadequate procedures, supervision and reinforcement of safety rules
CSI Driving Safety Recommended Practice

SAFETY ELEMENTS FOR DRIVERS

1. Staying alert and preventing fatigue
2. Drugs and Alcohol
3. Seatbelts
4. Passengers
5. Loads
6. Respecting Road Rules and Road Signs
7. Mobile Phones and Two-way communication devices
8. Highly Visible Vehicles and Drivers
CSI Driving Safety Recommended Practice

SAFETY ELEMENTS FOR MANAGERS

1. Leadership and Accountability
2. Driver Qualification & Selection
3. Driver Training & Assessment
4. Vehicle Selection & Specification
5. Vehicle Maintenance & Servicing
6. Vehicle Pre-Start Checks
7. Vehicle Data Recorder Systems
8. On-site Road and Traffic Management
9. Journey Hazard Management
GUIDELINES

Management guidelines are included to assist implementation of the safety elements and ensure they are followed effectively, eg.

4 Vehicle selection & specification

The following minimum equipment should be installed and securely fixed, where practical / possible, on light vehicles purchased as of 1 January 2010:

- Head rests (all seats)
- Air bags (at least for driver)
- Driver and passenger side-mirrors
- Anti-lock brakes
CSI Members continue to make good progress on reduction of lost-time injury rates

However the recent trend in fatality rates has been adverse, despite huge safety commitments by CSI Member

CSI fatality analysis (2007, 2008 and 2009) reveals that:

- By category, Contractors account for nearly 60% of all fatalities, with a Contractor Fatality Rate estimated to be ~10 times that for Employees
- Driving (on-site & off-site) accounts for nearly 50% of all fatalities

Reduction of both Contractor and Driving-related fatalities presents a significant and urgent safety challenge to CSI Members

This challenge may well increase as CSI Members expand further in developing regions

Therefore specific CEO-endorsed CSI initiatives on Contractor and Driving-related fatalities are now in place
Kenyan economy loses US$50 million per year due to road accidents.

Amongst highest road fatalities in the world

510 deaths per 100,000 vehicles

Affects 19-35 year olds

Low to middle-income class

Source: WHO World Report on Road Traffic April 2004, W Odera
The broad context of the country, influenced performance directly

There was no compelling framework to manage road risks

Transporters viewed safety negatively - Seen as cost burden!

No formal structure existed to drive safety in BCL

Poor Attitude/Justification....We are in a bad environment there is nothing much we can do!!!!

Comfortable with fatality improvement ..5 fatalities not 6 …quite an improvement, maybe 4 is achievable.
Lafarge – Kenya Road Safety Challenge

- Driver training insufficient/ non existent
- Social attitudes: driver behavior
- Absence of enforcement
- Poor road network, suddenly transformed into smooth roads

Causes of road accidents in Kenya, btw. ‘90-’04

- Human factor: 85%
- Other factors: 8%
- Road environment factor: 2%
- Vehicle factor: 5%
LEA Distribution Network
Journey s extending to over 1800 Kms through Kenya & Uganda
2005 **Awakening**

- Shift in management focus to prioritize Road Safety
- Theme adopted: Road Safety …… Our Number one Priority!
- Began exploring key safety drivers - What Actions & Programs are needed?
- Conceptualization of Road Safety framework – *The Tripod*
Lafarge East Africa Road Safety Conceptual Framework

The Tripod of the conceptual framework for Road safety
2006  

**Foundation building**

- Road safety committee set up for LEA
- Committee resolved on 2 major actions
  - Launching safety campaign to drive transporter’s commitment
  - Made a resolution of Defensive driving certification for clinker drivers
- Two Key Outcomes realized:
  - Drivers Pass
  - Site sub-committees, including transporter directors, meeting monthly
A formal management structure for Road Safety unveiled – Coordinators & Marshalling team

- Road safety campaigns sustained
- Mandatory vehicle inspection program started
- Defensive driving made a requirement for all contracted drivers
- Spotting of transporters in contractual pre-qualification stage
- Road Patrols by Lafarge Kenya and later with Transporters
- Penalty scheme set up and implemented immediately

Kenya Road fatalities

Year

2007-2008 Capacity Building
2009  *Towards Maturity*

1. **One-on-one meetings with transporters**
2. **Route Hazard Mapping & Driver Tool Box talks**
3. **Journey Managements implemented**
4. **GPS Tracking & Driver Coaching**
5. **Checkpoints opened along routes**

Kenya Road fatalities chart:
- **Year**:
- **Fatalities**

Lafarge – Kenya Road Safety Challenge
Number of Contracted Transporters

2005

2007

2009
Lafarge – Kenya Road Safety Challenge

Managing Driving Violations through GPS

Trend of Violations for all transporters since program Launch

NB: Links Driver and Truck
## Road Hazard Mapping program

- Routes mapped for hazards
- Defensive actions for each condition proposed
- Points marked as per global Position
- Road patrols key to updating hazard maps

<table>
<thead>
<tr>
<th>Risky places</th>
<th>Longitude</th>
<th>Latitude</th>
<th>Distance From Nairobi</th>
<th>No</th>
<th>Defensive Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Mlolongo - Cabanas</td>
<td>1°23'34.75&quot;S</td>
<td>36°56'30.96&quot;E</td>
<td></td>
<td></td>
<td>Abrupt Change From Duo Carriage Way To Single Carriage Way</td>
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<tr>
<td>2 Kangemi - Waiyaki way</td>
<td>1°15'51.16&quot;S</td>
<td>36°44'58.04&quot;E</td>
<td>12</td>
<td></td>
<td>Traffic congestion</td>
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<td></td>
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<td></td>
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<td></td>
<td>Road slippery when wet</td>
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<tr>
<td>3 Kikuyu</td>
<td>1°14'46.80&quot;S</td>
<td>36°40'48.62&quot;E</td>
<td>22km</td>
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<td>Slippery road</td>
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<td>Poor visibility due to fog</td>
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<td></td>
<td></td>
<td></td>
<td>Busy with matatu &amp; pedestrians</td>
</tr>
<tr>
<td>4 Mai Mahiu</td>
<td>0°58'56.72</td>
<td>36°35'08.32&quot;E</td>
<td>54km</td>
<td></td>
<td>Busy With Cyclists, Pedestrians, Motorists And Trucks.</td>
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<tr>
<td></td>
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<td></td>
<td></td>
<td></td>
<td>Road Surface Slippery When Wet.</td>
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<td></td>
<td></td>
<td>Recommended Rest And Night Stop Area</td>
</tr>
</tbody>
</table>

- Keep left
- Reduce speed
- Speed limit 30kpm
- Do not overtake
- Use the 4 keys of defensive driving
Journey Planning program

- 3 Key elements

- All deliveries follow designated routes

- Mandatory journey planning at point of Loading

- Set checkpoints along the route within 4 hours drive

- Driver must take a 15-30 minutes break after every 4 hours of continuous driving

- Trip Card stamped at every checkpoint
Analyzing Road Patrol findings

Level of Compliance on KPIs

- Fastening seat belt: 95%
- Without passengers: 97%
- Parking without obstruction: 99%
- Without dangerous overtaking: 99%
- Not night driving: 100%
- Without breakdowns: 100%
- Driving without answering calls: 97%
- Well tied tarpaulin: 99%
- Not siphoning diesel: 99%
- Wearing reflective jackets: 99%
- Sober driving: 100%
External Road Safety Campaigns

- Collaborative exercise
- Relevant government ministry & national road safety council
- Media involvement
- Annual since 2007

- Caravans convey message to public
- Banners mounted on trucks
- Share message in music & dance
- Stops at major truck packing points