

The Worldwide Cement Industry Sustainability Initiative

Paper #18

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INTRODUCTION

The subject paper will describe a worldwide cement industry collaborative initiative conducted under the auspices of the World Business Council for Sustainable Development. The first section of the paper will describe the cement industry, Lafarge, and the World Business Council for Sustainable Development (WBCSD). The paper will then set forth the WBCSD membership requirement the member companies publish sustainability reports with a focus on Lafarge's 2003 Sustainability Report. The third section of the paper will discuss a three-year program that 10 cement companies sponsored to define what sustainable development means for the future of the worldwide cement industry. The fourth section of the paper will then describe the "Agenda for Action" of the participating cement companies in response to the initial consultant's report. The paper will next describe the six key areas that the cement companies believe will make a significant contribution to achieving a more sustainable society and where there are significant environmental and social benefits that can be gained. The fifth section of the paper will describe the status of the various task force work projects that are being implemented for each of the six key areas. The final section will provide conclusions and what results, if any, have been observed to date for the key areas in the "Agenda for Action."

DEFINITION OF THE KEY PLAYERS

The WBCSD is a coalition of 160 international companies united by a shared commitment to sustainable development via the three pillars of economic growth, ecological balance, and social progress. The mission of the WBCSD is to provide business leadership as a catalyst for change toward sustainable development ¹ and to promote the role of eco-efficiency, innovation and corporate social responsibility. Lafarge is a founding member of the WBCSD and presently Lafarge Chairman of the Board Bertrand Collomb is chairing the WBCSD.

Lafarge is the world's leader in building materials and each of its four divisions hold top-rankings: 1st for Cement and Roofing, 2nd for Aggregates & Concrete, and 3rd for Gypsum. Lafarge's worldwide sales amounted to €14.6 million in 2002. Lafarge is present in 75 countries with a work force of 77,000 people. Many of Lafarge's businesses rely on raw materials extracted from the earth's crust from our quarries.²

The cement industry is a well-established manufacturing industry dating back to the Greek and Roman Empires where cement was used in structures over 2000 years old. The modern cement industry dates back to the 1800s. The basic product is a fine gray powder which sets after a few hours when mixed with water and then hardens in a few days into a solid, strong material. Virtually all the cement produced globally is mixed with sand, aggregates and water and used to make concrete and mortars.³ Cement is the critical ingredient in concrete locking together the sand and gravel constituents in an inert matrix. It is therefore a critical part of meeting society's needs for housing and basic infrastructures, such as bridges, roads, water treatment facilities, schools and hospitals. Due to its use in construction, cement is made to strict standards.

WBCSD SUSTAINABILITY REPORT REQUIREMENTS

The WBCSD expects, as a condition of membership, that every member company will publicly report on their environmental performance and to aspire to expanding their reporting to cover all three aspects of sustainable development.⁴ In 2002, Lafarge published its initial Sustainability Report and published its second Sustainability Report in 2003.⁵ The Lafarge Sustainability Reports cover the Group's economic, social, and environmental performance for the prior year. It is designed for a diverse group of stakeholders.⁶ The report is prepared in accordance with the Global Reporting Initiative guidelines.

In the first report, Lafarge set 17 Group or worldwide objectives. Achieving these global objectives does not imply that each and every plant will reach the same performance locally. In the 2003 Report, Lafarge established new social and economic objectives. The 2002 Report was dedicated to exploring issues and the challenges of sustainability and establishing some key objectives; the second Report has a greater focus on our performance towards meeting the performance indicators. Overall, Lafarge have established three overarching objectives for the Sustainability Reports: (1) enhance dialogue with the stakeholders, (2) report on the triple bottom line performance and (3) reflect the values and Principals of Action.

The 2003 Sustainability Report (focusing on FY 2002 achievements) highlights 4 key areas, as follows:

- 1) Significantly increase stakeholder's consultation and exchanges of views, and developing partnerships with NGOs to aid in improving the environmental and social performance. In this regard, Lafarge is working closely with three large NGOs on each of the three pillars of sustainable development:
 - a) WWF on environmental and conservation issues in the framework of the Lafarge/WWF Conservation Partnership of 2000.⁷

- b) CARE to tackle health and social issues, such as HIV/AIDS, in emerging countries.
- c) Habitat for Humanity—Lafarge is in the process of extending our existing regional partnerships to a global agreement to build 300 houses in 25 countries.
- d)
- 2) 2002 Achievements - Lafarge is now present in all major sustainability stock indexes (DJSI, DJSI Europe, FTSE4GOOD, and ETHIBEL). Lafarge also has committed to four sustainability initiatives (WBCSD Cement Initiative, Global Corporate Citizenship, Global Business Coalition on HIV/AIDS, United Nations Global Compact.
- 3) Social Performance - Lafarge instituted a new health and safety policy and safety performance management system. Lafarge also set objectives on diversity, training, and employee share-ownership.
- 4) Environmental Performance - Significant progress has been achieved on the environmental performance and Lafarge is on track to achieve most of its objectives set in the 2002 Sustainability Report including the CO₂ emissions reduction commitment.

SCOPING, INDEPENDENT RESEARCH AND STAKEHOLDER CONSULTATION

The Cement Sustainability Initiative began in 1999 when three global cement companies first came together as a group under the auspices of the WBCSD as the Working Group Cement (WGC) to explore what sustainable development meant for the cement industry. Seven other international cement manufacturers were recruited to assist in this task.⁸ The WBCSD commissioned Arthur D. Little to conduct a scoping study to identify the issues most relevant to the industry and to develop a vision for the future.⁹ This study formed the framework for a two year research program that assessed current industry practices and provided recommendations for cement companies and their stakeholders to consider.

In May 2000, the WBCSD commissioned the Battelle Memorial Institute to carry out the two-year research project sponsored by the 10 cement company core group.¹⁰ The 10 companies in addition to financial support also provided technical and other information to ensure that the final report would be meaningful to others in the cement industry. To assure the independence of the study, an external assurance group was set up to review the research and make certain that the work fairly represented multiple viewpoints and the range of issues that needed to be included.¹¹

The research project involved experts from industry, academia, and NGOs in 13 separate sub-studies each focused on different aspects of sustainable development. In addition, seven dialogue sessions were held around the world to engage a wide spectrum of stakeholders. In March 2002, Battelle Memorial Institute's Report was published by the WBCSD.¹² Battelle's recommendations for the sponsoring cement companies for their consideration and action addressed the following issues:

- Climate change

- Resource productivity
- Employee well-being
- Community well-being
- Ecological stewardship
- Regional development
- Business integration of sustainable development
- Innovation
- Cooperation

These issues and recommendations formed the basis for the ten cement companies response in the “Agenda for Action on Sustainable Development” discussed in the remaining three sections of this paper.

AGENDA FOR ACTION

On July 3, 2002, the 10 core cement companies published their Agenda for Action on Sustainable Development after a thorough review and analysis of the Battelle Memorial Institute Research Report and Recommendations. The Agenda for Action focuses on six priority issues: climate change, fuels and raw materials, employee health and safety, emissions reduction, local impacts and internal business processes. In launching the agenda, the 10 core cement companies indicated that they will report on their progress in implementing the programs in 2005, and then 2007. The Agenda for Action aims to work with other sectors of society and makes an open invitation to other cement companies to join in the initiative.¹³ In July 2002, Lafarge internally communicated to its employees the substance of the Agenda for Action and its commitment to play a leadership role in its evolution and implementation of its action plans.

For each of the six priority issues, the Agenda for Action includes joint projects to develop various work products and individual company actions to be implemented, as follows¹⁴:

a) Climate Change

1) Joint Projects:

- Develop a Carbon Dioxide (CO₂) Protocol for the cement industry.
- Work with WBCSD/World Resources Institute (WRI), et al. to develop public policy recommendations and market mechanism for reducing CO₂ emissions.

2) Individual Company Actions:

- Define and make public company baseline CO₂ emissions
- Develop a climate change mitigation strategy and publish targets and progress by 2006.¹⁵
- Report annually on CO₂ emissions¹⁶.

b) Fuels and Raw Materials

1) Joint Projects:

- Develop a set of guidelines for the responsible use of conventional and alternative fuels and raw materials.
- 2) Individual Company Actions:
- Apply guidelines developed for fuel and raw material use.
- c) Employee Health and Safety
- 1) Joint Projects:
- Set up a Health and Safety Task Force
 - Establish a Health and Safety information exchange
- 2) Individual Company Actions:
- Respond to Task Force recommendations on systems, measurement and public reporting.¹⁷
- d) Emissions Reduction
- 1) Joint Projects:
- Develop an industry protocol for measurement, monitoring and reporting emissions.
 - Find solutions to more readily assess emissions of dioxins/furans and volatile organic compounds (VOCs).
- 2) Individual Company Actions:
- Apply the protocol for measurement, monitoring and reporting of emissions.
 - Make emissions data publicly available and accessible to stakeholders by 2006.
 - Set emissions targets on relevant pollutants and report publicly on progress.¹⁸
- e) Local Impacts
- 1) Joint Projects:
- Develop guidelines for an Environmental and Social Impact Assessment (ESIA) process that can be used at all cement plant sites and associated quarries.
- 2) Individual Company Actions:
- Apply the ESIA guidelines and develop tools to integrate them into the business decision-making process.
 - Draw up reclamation plans for operating quarries and plant sites and communicate them to local stakeholders by 2006.¹⁹

f) Internal Business Processes

1) Joint Projects:

- Develop methods to track cement industry performance through the use of key performance indicators.
- Produce a full progress report after 5 years (2007) and an interim report in 3 years (2005).

2) Individual Company Actions:

- Integrate sustainable development programs into existing management, monitoring and reporting systems.
- Publish a business ethics policy by 2006.²⁰
- Establish a systematic dialogue process with stakeholders to understand and address their expectations.
- Report progress on developing stakeholder engagement programs.²¹
- Develop documented and auditable environmental management systems at all cement plants.²²

The participating cement companies have committed to making regular reports on their progress with an interim report in 2005 and a full five-year progress report and revised agenda in 2007. Other cement companies are welcome to join these initiatives in whole or for specific projects. Third parties are encouraged to work in partnership with the cement companies on specific projects to challenge our objectives, help us deliver sound work products and assess the progress the core group is making.

TASK FORCE ACTIONS AND PROGRESS

At the November 13, 2003 Cement Sustainability Initiative (CEO) Meeting in Washington, D.C., a task force status report was given on the work of the six priority issues. Set forth below are highlights of the status reports:

1) Task Force #1 – Climate Change

- a) Improved the CO₂ accounting protocol for specific fuels.
- b) Developed a position paper on allowance allocation for the EU emissions trading approach.
- c) Most participating companies were using the CO₂ protocol for reporting purposes.

2) Task Force #2 – Fuels and Raw Materials

- a) Developed a “principles” document for managing fuels and raw materials (still need to develop guidance for an appropriate management system).
- b) Key Performance Indicators (KPIs) have been identified but not confirmed; need to collect background data on fuels and materials use.

3) Task Force #3 – Health and Safety

- a) Agreed to preliminary KPIs for reporting progress; to be finalized in 2004.
- b) Exchanged and analyzed fatality statistics for 2000-02 (the key finding is the high level of motor vehicle related incidents primarily involving contractors).
- c) Preliminary accident data collected for 2002, but have not resolved how will address contractor's incidents.
- d) Will commence sharing accident data in 2004 through more rapid alerts concerning serious incidents (this approach may help to reduce similar types of accidents and overall accident rates).

4) Task Force #4 – Emissions Reduction

- a) Agreed to monitor and report dust, NO_x and SO_x from main stacks (2002-03 will be the baseline data year).
- b) Commissioned work on dioxins/furans emissions for POP's expert group meeting (the objective is to have a peer-reviewed paper published).

5) Task Force #5 – Local Impacts

- a) Initial draft of ESIA guidelines prepared by Manchester University; scheduled for completion in 2004.

6) Task Force #6 – Reporting and Communications

- a) Have proposed preliminary KPIs including ISO 14,000 environmental management system.
- b) Established a general format for the CSI progress reports due to be published in 2005 and 2007.

CONCLUSIONS AND OBSERVABLE RESULTS

In publishing the Agenda for Action, the 10 core international cement companies stated a desire to play a meaningful role in a sustainable future. They noted that for two issues (climate change, and fuels and raw materials), the cement industry can play a significant role in developing sustainable solutions. Since the project was initiated in 1999 to today, a significant commitment of resources, research, recommendations, prioritizing of issues, and initial work products have been carried out by the WBCSD cement coalition and the individual companies.²³ Unfortunately a lot more work needs to be done to show significant improvement in our sustainable development performance.

The industry recognizes that sustainable development presents long-term strategic challenges. There is much to do as the cement industry moves down the path toward sustainable development and the industry will have to tackle difficult problems and make choices between competing alternatives and outcomes. These are seldom-simple choices, and most cannot be made by the industry acting in isolation. Many such decisions will require engagement and

dialogue with many stakeholders. To be a true industry effort, we hope that other cement companies throughout the world and other stakeholders will decide to join the WBCSD Cement Sustainability Initiative member companies and its Agenda for Action at any stage of the initiative and specific projects.²⁴

FOOTNOTES

1. The WBCSD defines “sustainable development” as development which meets the needs of people living today without compromising the ability of future generations to meet their own needs. It requires a long-term vision of industrial progress, preserving the foundations upon which human quality and life depends—respect for basic human needs, and local and global ecosystems.
2. E.g., limestone, aggregates, sand and gravel, clay, and gypsum.
3. Concrete is second only to water as the most consumed substance on earth with nearly three tons used annually for each person on the planet.
4. See World Business Council for Sustainable Development, Annual Review 2001, page 28.
5. A copy of the Lafarge Sustainability Report can be viewed on the Lafarge website at www.lafarge.com.
6. E.g., employees, stockholders, customers and suppliers, end-users, public authorities, trade unions, NGOs, elected officials, the media, local communities, other companies.
7. The WWF/Lafarge Global Conservation Partnership has already resulted in a Lafarge global CO₂ reduction commitment, quarry reclamation standards, Lafarge environmental KPIs.
8. CEMEX, Cimpor, Heidelberg Cement, Holcim, Italcementi Group, Lafarge, RMC Group, Siam Cement Industry, Taiheiyo Cement, and Votorantim form the core group of 10 companies.
9. The final vision of the 2020 cement industry is: “Cement companies have integrated sustainable development into their global operations, are known as leaders in industrial ecology and innovators in carbon dioxide management, are regarded as attractive employers, and have established relationships of trust with the communities in which they operate.”
10. Battelle Memorial Institute, a not-for-profit research organization, was selected because of its technical expertise in environment and sustainable development matters and in order to guarantee the quality, independence and objectivity of the research and its conclusions.
11. Dr. Mostafa Tolba (Former Director-General of UNEP), William Reilly (Former Administrator of US EPA), Corinne Lepage (Former Environment Minister of France), Professor Victor Urquidi (Past President and Professor Emeritus of Collegio de Mexico), and Professor Istran Lang (Past President of the Hungarian Academy of Sciences).
12. Battelle Memorial Institute’s Report can be found at www.wbcSDcement.org.
13. WBCSD, Cement Sustainability Initiative Agenda for Action Press Release (July 3, 2002). Several other cement companies have either joined the Cement Sustainability Initiative or are seriously considering it, such as, Titan Cement, CRH, Ash Grove Cement.
14. The Agenda for Action is available on the WBCSD website at www.wbcSDcement.org.
15. Lafarge and WWF entered into a voluntary global CO₂ reduction commitment in November 2001 and was welcomed by WWF into their Climate Savers Program.
16. Lafarge routinely publishes its CO₂ emissions and its progress towards meeting its CO₂ reduction commitments as part of its annual Sustainability Report.
17. Lafarge in 2003 has implemented a Health and Safety Management System for all of its Operating Divisions; in North America, the Health and Safety Management System is applicable to all product lines and manufacturing operations; monthly Key Performance Indicators are tracked and reported to senior management.

18. Lafarge has a target level for stack dust emissions of 50mg/NM₃ for all cement plants that is reported on in our annual Sustainability Report. We also have a target reduction level for CO₂ (see Footnote 15).
19. Lafarge has a target of 80% of our worldwide quarries having a Lafarge approved rehabilitation plan by 2004. We reported in 2003 that 87% of our quarries have such plans in place.
20. Lafarge North America published an initial Ethics Policy in 1994 applicable to all Lafarge North America employees. The ethics policy was recently revised and reissued in August of 2003 and is applicable to all employees and members of the Board of Directors.
21. See Lafarge's 2003 Sustainability Report, pages 8 and 16.
22. Lafarge North America is in the process of implementing ISO 14,000 compatible environmental management systems at all of its plants for all product lines.
23. E.g., Arthur D. Little Report, Battelle Memorial Institute Research and Recommendations, the WBCSD 10 sponsor cement companies' Agenda for Action and the six priority issue Task Force's initial work products. In addition, several companies like Lafarge have started to implement elements of the 6 priority issue commitments, i.e., CO₂ reduction commitment, other air pollutant target levels, health and safety management systems and KPIs, and environmental management systems.
24. Since the publication of the Agenda for Action, three additional cement companies have joined the Cement Sustainability Initiative.