

AGENDA
ACI Committee 130 – Sustainability of Concrete

ACI Fall 2009 Convention, Chicago, Illinois
Part 1: Monday, March 22, 2009, 2-5pm, Chicago 8
Part 2: Tuesday, March 23, 11-1pm, Chicago 6

Monday Agenda

- 1) Welcome and Introductions
- 2) Approval of Fall 2009 minutes
- 3) New meeting format
 - a) Monday: 2-4pm ballot resolutions followed by general interest topics from 4-5pm
 - b) Tuesday 11-1pm: subcommittee reports followed by unfinished business (including ballot resolution)
- 4) Update on documents (Schokker, Buffenbarger)
 - a) Emerging Technology in Concrete Sustainability
 - i) Chapter 1: Introduction → resolving negatives
 - ii) Chapter 2: Overview of Cement & Concrete Sustainability
 - iii) Chapter 3: Concrete Industry
 - iv) Chapter 4: Measurements of Sustainability
 - v) Chapter 5: Summary (or additional information and future direction)
 - vi) Glossary (Buffenbarger) → resolving negatives
 - b) Concrete Sustainability
 - i) Outline under development (further discussion Tuesday)
- 5) Ballot Resolution (Emerging Technology in Concrete Sustainability)
 - a) Chapter 1
 - b) Glossary
- 6) CAM Sustainability Publications
 - a) *The Sustainable Concrete Guide – Strategies and Examples*
 - b) *The Sustainable Concrete Guide – Applications*
- 7) Special Publications
 - a) *Concrete: The Sustainable Material Choice* (Lorenz)
- 8) Convention Sessions
 - a) Concrete Sustainability Forum (Buffenbarger)
 - b) Upcoming Sessions (Rowland)
 - i) Sustainable Design with Structural Concrete (Chicago)
 - ii) Sustainable Design with Concrete, Part I (Pittsburgh)
 - iii) Sustainable Design with Concrete, Part II (Pittsburgh)
 - iv) Green Binders Technology (Pittsburgh)
 - v) Sustainability of Concrete Pavement (Pittsburgh)
 - vi) Design of Sustainable Concrete Bridges (Pittsburgh)
 - c) Future topics

9) Other Old Business

10) New Business

- a) Review of comments from the TAC breakfast (Exhibit A)
- b) Requests from other committees
- c) Previous concrete student competition

11) Presentation on Eco-Efficiency Calculator to meet carbon tracking requests to contractors (BASF)

12) Adjournment of Monday meeting

Tuesday Agenda

1) Welcome and Introductions

2) Brief review of Monday meeting (Schokker)

3) Subcommittee Updates (focused on outline for “Sustainable Concrete” and ideas for other activities outside of the document)

- a) 130A: Materials (Chairs: Doug Hooton & Tom VanDam)
- b) 130B: Production/Transportation/Construction (Chairs: Kevin MacDonald & Matt Offenberg)
- c) 130C: Structures in Service (Chair: Tracy Marcotte)
- d) 130D: Rating Systems/Sustainability Tools (Martha Van Greem, Jeff Volz, & Arezki Tagnit-Hamou)
- e) 130E: Design/Specifications/Codes/Regulations (Chairs: Mark Chrzanowski & Larry Church)
- f) 130F: Social Issues (Chair: David Darwin)
- g) 130G: Education/Certification (Chairs: Larry Rowland & Khaled Awad)

4) Discussion of next step for Concrete Sustainability Document

5) Completion of any remaining business from the Monday meeting

6) New Business

7) Adjournment

Most tables discussed either Sustainability or ACI procedures or the convention. It seems that all found the time fruitful. Sustainability notes are given below.

Sustainability ideas:

- The committees, in general, are thinking about how to promote sustainability in their committees, but the general consensus was that they were looking for some direction from the ACI Sustainability committee (130).
- At one table, more specific ideas were discussed, such as:
 - Manual of concrete inspection (ACI 311) should include life cycle guidelines
 - Energy Efficiency (ACI 122) should include benefit of using concrete vs. wood or others.
 - Pervious Concrete (ACI 522) include a discussion of LEED rating of pervious concrete
 - SCM promotion as it lowers CO₂ emission
 - Low VOC curing compounds should be included in ACI 308
- Need a clearer definition of sustainability and it should be provided by ACI 130
- Fly Ash:
 - The main area of concern was the EPA draft ruling regarding making fly ash a hazardous material.
 - It seems that there is confusion on what would be the consequences of this development. ACI needs to follow-up this issue and inform the concrete industry.
 - Future usage of fly ash in concrete.
- Most think of sustainability as strength. Since structures have a birth and a death, they can go thru numerous phases and uses. So the engineer is encouraged to look beyond the structures initial use and consider potential for future applications. Also, energy consumption during the life of the structure is important. Including the cost of disposal.
- sustainability and how to incorporate into ACI docs
- development of TechNotes
- sustainability opposing adequate design requirements for fire design
- sustainability and replacement cycle:
 - Life-Cost analysis and estimation is becoming and will need to be an important part of Sustainability efforts.
- sustainability and creep for new materials.
- LEED rating of concrete should be championed by ACI. Add information on concrete and LEED in the CKC
- There is a disconnect between Sustainability Concepts and Applications
- Sustainability versus performance.
- There is a need to address Sustainability as a System rather than only in Materials.
- Committee 343 - Concrete Bridges are addressing sustainability in design aspects of bridge decks in addition to material performance.
- Committee 447- FE is considering Performance-based design in FE which would lead to more sustainable structures.
- Prestressed concrete and discussion on the fact that although prestressed concrete buildings have great advantages in the area of sustainability (less concrete in original construction, less volume to heat and cool in the finished structure), this receives no LEED credit. The group felt that if we made this information available in ACI documents that it might be possible to influence the LEED system.