Minutes of Meeting
ACI Committee 121
Quality Assurance Systems for Concrete
Marriott New Orleans Hotel
New Orleans, LA

Sunday November 8, 2009
3:00 to 4:30 pm
Balcony N

1. Call to Order and Welcome
   The Chair, Paul Hedli, called the meeting to order at 3:00

2. Introduction of Members and Guests
   All present introduced themselves.

3. Update of Membership Status
   It was pointed out that there are three new Associate Members, Michelle Walters, Mihaela Birley, and Rongyun Xu (who goes by the email name of Annie W).
   It was noted that the ACI website does not have a correct list of the membership.

4. Establish Date of next Meeting
   The next meeting will take place on Sunday, March 21, 2010, 3:30 to 5:00 PM.
   There was some confusion today about the starting time of the meeting. What was originally requested was a 3:30 start. But it was listed in the Daily Program as 3:00. So things got off to a slow start.

5. Attendance
   Attending were the following:

   Voting Members:
   Hedli, Paul
   Ardahl, Jon
   Tyler, Thomas
   Anekuedi, Godwin
   Fradua, Martin
   Marchese, Steve
   Ooi, Oon-Soo
   Takhtovich, Eugene
   Vogt, Woodward

   Associate Members:
   Holley, Jack
   Montano, Homero
Guests
Balck, Lars
Dippold, Cory
Frazier, Tim
Hays, Raymond
Marchese, Michael
Parnes, Jerry
Williamson, Steve

6. Approval of Minutes from (Previous) Meeting
The Minutes from the San Antonio were accepted by the Committee.

7. Announcements
- The term of the present Chair will end after the next convention. The Chair has submitted the names of the prospective replacements.
- The term for the incoming Chair will be three years instead of the two years. The new Chair will now serve for two terms instead of three. The total number of years remains at six.

8. Old business
A. New Document – 121R-08 – Guide for Concrete Construction Quality Systems in Conformance with ISO 9001-2000. The three remaining “S” comments from TAC review of 10/14/07 were not resolved and remain open for resolution. They will have to be addressed in any upcoming revisions to the Document.

B. New Orleans Technical Session Update – The technical session will take place tomorrow. Steve Marchese reported that all systems were go and every one was ready. The session went very well the next after noon and was well attended. Thanks to speakers Goodwin Amekuedi, Eugene Takhtovich, Raymond Hays, Jack Holley, Woody Vogt, and Cory Dippold for their hard work. (See attached photos from our Technical Session)

C. Chicago Session Technical Update – Presently there are five (5) speakers. Subsequent to the meeting Mr. Casimir Bognacki agreed to also give a presentation regarding his work at the World Trade Center. This makes account of six (6). [Post meeting addendum: After the meeting Mr. Tyler contacted all the Chicago speakers and completed the application for final approval before the deadline. The final approval for the Chicago Session was given on November 20, 2009 for the session to take place on Monday, March 22, from 2:00 until 5:00 in the afternoon.]
9. **New Business**
   
   A. **Possible Update and Revision to the 121 Document based on the new ISO 9001-2008.** Tom Tyler reported on the changes made in the updated ISO document. He pointed out that the changes were mostly of the nature of clarifications and minor requirements. He had put together a white paper on his review which he distributed to the Committee attendees. It is titled "Commentary – Revisions in the ISO 9001-2008 Prompting Possible Changes to ACI 121R-08 – Guide to Concrete Construction Quality Systems in Conformance with ISO 9001-2000". The discussion that followed determined that revision of the 121 Document was a viable option and that the revision to the ISO would make a good reason to do so. And at the same time the revision could address the remaining “S” comments from TAC and any other enhancements to the text seen as necessary.

10. **Adjourn**
    
    The meeting was adjourned at 4:30

---

Paul Hedli
Chair

Thomas Tyler
Secretary

Attachments:

Sign in Sheet


Technical Session Photos
<table>
<thead>
<tr>
<th>Name and Address (Please Print):</th>
<th>Comm. Member?</th>
<th>Visitor? **</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>THOMAS TILGER</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Jack Holley</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Tim Frazier</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>On-Soo Jo</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Gene Tachtovich</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Homero J. Montano R.</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>MARTIN J. FRADUA</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Raymond Hays</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Woody Kepf</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Jon B. Andal</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>LARS BACKE</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Paul Hedli</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Stephen Marchese</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Michael Marchese</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Godwin O. Amekwede</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Jerry Patterson</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Technical Committee Attendees:* The purpose of an ACI technical committee is to reach consensus and publish information on concrete-related issues within its mission. The discussions at the committee’s meetings are part of this consensus process, and are not the official position of the committee. Only a published committee document represents the formal consensus of the committee and the Institute.

**Visitors interested in committee membership should contact the chair or visit the ACI website, www.concrete.org, for a membership application.**

*Return this Form to the Committee Chair or Secretary*
<table>
<thead>
<tr>
<th>Name and Address (Please Print):</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cory Dippold - 27 Bleeker St:</td>
</tr>
<tr>
<td>Madison NJ: CDippold80306</td>
</tr>
<tr>
<td>Steen Williamson</td>
</tr>
<tr>
<td>5-Williamson@brayman</td>
</tr>
<tr>
<td>construction.com</td>
</tr>
<tr>
<td>Brayman Construction</td>
</tr>
<tr>
<td>412-292-8044, 315 7th</td>
</tr>
<tr>
<td>St West, Huntington, Wv 25701</td>
</tr>
</tbody>
</table>

**Technical Committee Attendees:** The purpose of an ACI technical committee is to reach consensus and publish information on concrete-related issues within its mission. The discussions at the committee’s meetings are part of this consensus process, and are not the official position of the committee. Only a published committee document represents the formal consensus of the committee and the Institute.

**Visitors interested in committee membership should contact the chair or visit the ACI website, www.concrete.org, for a membership application.**

*Return this Form to the Committee Chair or Secretary*
Executive Summary

- A review was undertaken of the new ISO 9001-2008 as compared to the old ISO 9001-2000 to determine the necessity for revision to the ACI 121R-08 – Guide for Concrete Construction Quality Systems in Conformance with ISO 9001-2000. The numbering system, the format, and the majority of the respective texts were found to be the same.

- There were several revisions that enhanced or clarified certain requirements. However, these additionally noted requirements are of such a nature as to be already apparent.

- Many of the changes were related to text only such as revising sentences by moving words around, putting sentences into different paragraphs without any changes to them, replacing the term “International Standard” with “document” in some, but not all locations, adding “statutory in front of” requirements”, placing “where applicable” or “as applicable” in front of verbs, and adding notes to state what should already be understood.

- There was no change found significant enough to necessitate a rewrite of the ACI 121 Guidance document.

Some of the changes are as follows:

Section 4.1 General Requirements (Outsourcing of Processes)
The revision to Section 4 points out that the control of outsourced processes should be managed based on the nature, type, extent, and contractual terms for the control of the process. In other words, if one has subcontracted out a process, how important is it and who is to control it? This can depend on the criticality of the process and contractual arrangements with the sub vender as to who will do what. It was also pointed out that the organization is still responsible for the product, even if it is made through outsourcing. The Quality Management System should define this as to what level of control is to be undertaken and who will do what.
Section 4.1 already states that control of outsourcing has to be addressed in the QMS. This addition is only an elaboration of the requirement. Our commentary does not address outsourcing in this section, but it does in Section 7.4 – Purchasing. There does not appear to be a need to revise the commentary for this revision to ISO.

Section 4.2 Documentation Requirements
The revision requires that “records” of processes be maintained. It only defines them as “records”, whereas the old ISO referred to them as “documents needed by the organization to ensure effective planning, operation, and control of it processes”. These would be over and above the records one should keep for simple product control (testing and inspection). They might include production records, schedule, work methods, or cost reports. These are the option of the organization, but do lead to a better operation and are not uncommon.

We do not consider this revision to ISO to be any more than an elaboration of the existing language. And we have addressed the need for records beyond those required simply for product performance in our commentary of section 4.2.1. That should be adequate.

Further, the revision states that a single document may address the requirements of one or more procedures. Or a requirement for documented procedure may be covered by more than one document.

This only states the obvious.

The old ISO left the impression that all external documents needed to be identified and controlled. They now state that only those which are essential and relevant to the operation of QMS need be controlled. This again is obvious. Why would one bother to keep documents that did not affect the QMS?

Section 5.2 - Responsibility, Authority, and Communication
Under the old ISO, the Management Quality Representative was not specified as a member of the Organization. In other words, an organization could outsource their quality management. The new ISO has closed this loophole and now requires that the quality representative be a member of the organization.

This is a valid change and would merit a revision to the ACI 121 document. However, the ACI 121 is meant only a guide and not a contract document. Therefore, revising the entire document to cover this change is not justified.

Section 6.2 – Human Resources
The ISO revision states that personnel be competent

This only states the obvious.

Section 6.3 - Infrastructure
The revision has added Information Technology to the list of infrastructure elements which already includes buildings, supporting services, process equipment, etc.
Our commentary references “software, ….. and other peripherals”, so it appears to be covered in the text and commentary and also in that it is obvious that IT is part of the operation.

6.4 – Work Environment
Work environment was never defined in the old ISO. It is now defined and elaborated on in the new ISO as: “….those conditions under which work is performed including physical, environmental, and other factors such as noise, temperature, humidity, lighting and weather”
Our commentary already elaborates on it in terms of the correct environment for material, installation, and worker comfort requirements.

7.2 – Customer Related Processes
Customer requirements have been expanded into the identification and definition of post delivery requirements to include maintenance, servicing, warranties, etc.
This requirement is covered in the original text and the commentary of Section 7.2.1 and 7.2.2 in that the contractual requirements (and owner expectations, be they written or implied) be clearly defined and understood. That covers post delivery requirements.

Section 7.3 – Design and Development
The revision allows for the execution and recording of the design and development review and the verification and validation functions to be conducted and recorded either separately or in combination.
One would think this would be at the option of the organization and once again, is a statement of the obvious.

The revision requires that the organization add methods of preservation if they design a service contract.
Service is preservation. So the requirement is obvious.

7.6 – Control of Monitoring and control Devices.
Devices are now to be called “equipment”, in order to clarify what they are. The revision then goes on to discuss software suitability for the purpose intended.
One would think that software would be more of a device than a piece of equipment. And one would also think it obvious that the software would be confirmed as suitable for the use just as one would pick the correct application for any other equipment or device.

8.2 – Monitoring and Measuring
Under 8.2.1 - Customer Satisfaction the text has been expanded to spell out methods of measurement of customer satisfaction. They include surveys, warranties claims, etc. But these methods are more in line post market data for manufactured goods.
Our commentary recommends close client contact as being the most efficient of the methods. Perhaps our document could use some elaboration on the customer feedback issue, but it is not common in the concrete industry to see formal surveys and warrantee claims. So client contact for the concrete industry for should be adequate.
Under 8.2.2 Internal Audit the text has been revised to explicitly state that records are to be kept of audits. This again is stating the obvious, and the old text was strong enough to indicate that records should be kept.

Under 8.2.3 – Monitoring and Measurement of Processes the revision states that when measuring processes, the organization should determine the impact of process on the product conformity when designing the measurement methods. This means to put your effort in the right place. Once again, it is obvious that the important processes should be given the greatest emphasis. We state in our commentary that the frequency of inspection, documentation requirements, and criteria for acceptance are up to the organization and should be emphasized accordingly.
Steve Marchese
Technical Session Moderator

Godwin Amekuedi
The Successful Implementation of an ACI 121 Quality Management System at a Ready Mixed Concrete Company

Eugene Takhtovich
Quality Assurance for a Material Testing Lab

Woodward Vogt
QA and QC - A Three Year Old’s Perspective

Raymond Hays
Putting It all Together – The ISO Standard and the Concrete Industry

John Holley
ICRETE Optimization and QA Systems

Cory Dippold
Building Information Modeling (BIM) and Quality Assurance